

Threats to U.S. Vital Interests

Assessing Threats to U.S. Vital Interests

Because the United States is a global power with global interests, scaling its military power to threats requires judgments with regard to the importance and priority of those interests, whether the use of force is the most appropriate and effective way to address the threats to those interests, and how much and what types of force are needed to defeat such threats.

This *Index* focuses on three fundamental, vital national interests:

- Defense of the homeland;
- Successful conclusion of a major war that has the potential to destabilize a region of critical interest to the U.S.; and
- Preservation of freedom of movement within the global commons: the sea, air, outer space, and cyber-space domains through which the world conducts business.

The geographical focus of the threats in these areas is further divided into three broad regions: Asia, Europe, and the Middle East.

Obviously, these are not America's only interests. Among many others are the growth of economic freedom in trade and investment, the observance of internationally recognized human rights, and the alleviation of human suffering beyond our borders. None of these other interests, however, can be addressed principally and effectively by the use of military force, and threats to them would not necessarily result in material damage to the

foregoing vital national interests. Therefore, however important these additional American interests may be, they are not used in this assessment of the adequacy of current U.S. military power.

There are many publicly available sources of information on the status, capabilities, and activities of countries with respect to military power. Perhaps the two most often cited as references are *The Military Balance*, published annually by the London-based International Institute for Strategic Studies,¹ and the "Annual Threat Assessment of the US Intelligence Community" (formerly "Worldwide Threat Assessment of the US Intelligence Community," or WWTa).² The former is an unmatched resource for researchers who want to know, for example, the strength, composition, and disposition of a country's air force or navy. The latter serves as a reference point produced by the Office of the Director of National Intelligence.

Comparison of our detailed, reviewed analysis of specific countries with both *The Military Balance* and the ODNI's "Annual Assessment" reveals two stark limitations in these external sources.

- *The Military Balance* is an excellent, widely consulted source, but it is primarily a count of military hardware, often without context in terms of equipment capability, maintenance and readiness, training, manpower, integration of services, doctrine, or the behavior of competitors—those that threaten the national interests of the U.S. as defined in this *Index*.

Threat Categories

Behavior	HOSTILE	AGGRESSIVE	TESTING	ASSERTIVE	BENIGN
Capability	FORMIDABLE	GATHERING	CAPABLE	ASPIRATIONAL	MARGINAL

- The ODNI’s “Annual Assessment” omits many threats, and its analysis of those that it does address is limited. Moreover, it does not reference underlying strategic dynamics that are key to the evaluation of threats and that may be more predictive of future threats than is a simple extrapolation of current events.

We suspect that this is a consequence of the U.S. intelligence community’s withholding from public view its very sensitive assessments, which are derived from classified sources and/or result from analysis of unclassified, publicly available documents, with the resulting synthesized insights becoming classified by virtue of what they reveal about U.S. determinations and concerns. The need to avoid the compromising of sources, methods of collection, and national security findings makes such a policy understandable, but it also causes the ODNI’s annual threat assessments to be of limited value to policymakers, the public, and analysts working outside of the government. Consequently, we do not use the ODNI’s assessment as a reference, given its quite limited usefulness, but trust that the reader will double-check our conclusions by consulting the various sources cited in the following pages as well as other publicly available reporting that is relevant to challenges to core U.S. security interests that are discussed in this section.

Measuring or categorizing a threat is problematic because there is no absolute reference that can be used in assigning a quantitative score. Two fundamental aspects of threats, however, are germane to this *Index*: the threatening entity’s desire or intent to achieve its objective and its physical ability to do so. Physical ability is the easier of the two to assess; intent is quite difficult. A useful surrogate for intent

is observed behavior, because this is where intent becomes manifest through action. Thus, a provocative, belligerent pattern of behavior that seriously threatens U.S. vital interests would be very worrisome. Similarly, a comprehensive ability to accomplish objectives even in the face of U.S. military power would be of serious concern to U.S. policymakers, and weak or very limited abilities would lessen U.S. concern even if an entity behaved provocatively vis-à-vis U.S. interests. It is the combination of the two—behavior and capability—that informs our final score for each assessed actor.

Each categorization used in the *Index* conveys a word picture of how troubling a threat’s behavior and set of capabilities have been during the assessed year. The five ascending categories for observed behavior are:

- Benign,
- Assertive,
- Testing,
- Aggressive, and
- Hostile.

The five ascending categories for physical capability are:

- Marginal,
- Aspirational,
- Capable,
- Gathering, and
- Formidable.

As noted, these characterizations—behavior and capability—form two halves of an overall assessment of the threats to U.S. vital interests.

We always hold open the potential to add or delete from our list of threat actors. The inclusion of any state or non-state entity is based solely on our assessment of its ability to present a meaningful challenge to a critical U.S. interest during the assessed year.

Endnotes

1. For the most recent of these authoritative studies, see International Institute for Strategic Studies, *The Military Balance 2020: The Annual Assessment of Global Military Capabilities and Defence Economics* (London: Routledge, 2020).
2. See Office of the Director of National Intelligence, “Annual Threat Assessment of the US Intelligence Community,” April 9, 2021, <https://www.dni.gov/files/ODNI/documents/assessments/ATA-2021-Unclassified-Report.pdf>. For an assessment by the previous Administration, see Daniel R. Coats, Director of National Intelligence, “Worldwide Threat Assessment of the US Intelligence Community,” statement before the Select Committee on Intelligence, U.S. Senate, January 29, 2019, <https://www.dni.gov/files/ODNI/documents/2019-ATA-SFR---SSCI.pdf>.

China

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In the 2017 National Security Strategy, the Trump Administration made clear that it was shifting the focus of American security planning away from counterterrorism and back toward great-power competition. In particular, it noted that:

China and Russia challenge American power, influence, and interests, attempting to erode American security and prosperity. They are determined to make economies less free and less fair, to grow their militaries, and to control information and data to repress their societies and expand their influence....¹

Until the Biden Administration issues its own National Security Strategy, the United States can probably be expected to adhere to the policies outlined in the 2017 strategy.

Threats to the Homeland

Both China and Russia are seen as revisionist powers, but they pose very different challenges to the United States. The People's Republic of China (PRC) has a far larger economy, as well as the world's second-largest gross domestic product (GDP), and is intertwined in the global supply chain for crucial technologies, especially those relating to information and communications technology. As a result, it has the resources to support a comprehensive military modernization program that has been ongoing for more than two decades and spans the conventional, space, and cyber realms as

well as weapons of mass destruction, an area that includes a multipronged nuclear modernization effort.

At the same time, the PRC has been acting more assertively—even aggressively—against more of its neighbors. Unresolved land and maritime disputes have led Beijing to adopt an increasingly confrontational attitude toward territorial disputes in the South China Sea, in the East China Sea, and along the China–India border, and cross-Strait tensions have reemerged as a result of Beijing's reaction to the Democratic Progressive Party's victories in Taiwan's 2016 and 2020 elections.

In May 2020, the U.S.–China Economic and Security Review Commission reported that, “[w]ith the world distracted by COVID-19, China also intensified its multi-faceted pressure campaign against Taiwan. Chinese military aircraft crossed the median line of the Taiwan Strait three times in the early months of 2020 after only one such incursion in 2019.” The commission further noted that China conducted several provocative military exercises around the island and “continued its efforts to poach Taiwan's remaining diplomatic allies as the virus spread.”² Since then, China has been intruding regularly across the median line of the Taiwan Strait with ever-larger groups of aircraft.

Meanwhile, China's attempts to obscure the origins of the COVID-19 pandemic and stifle international investigations into the matter undermined global health efforts. Beijing has also sought to exclude Taiwan from multilateral efforts to combat the pandemic.

Growing Conventional Capabilities.

The Chinese People's Liberation Army (PLA) remains one of the world's largest militaries, but its days of largely obsolescent equipment are in the past. Nearly two decades of officially acknowledged double-digit growth in the Chinese defense budget have resulted in a comprehensive modernization program that has benefited every part of the PLA. This has been complemented by improvements in Chinese military training and, in 2015, the largest reorganization in the PLA's history.³ The PLA has lost 300,000 personnel since those reforms, but its overall capabilities have increased as older platforms have been replaced with newer, much more sophisticated systems.

A major part of the 2015 reorganization was the establishment of a separate ground forces headquarters and bureaucracy; previously, the ground forces had been the default service providing staffs and commanders. Now the PLA Army (PLAA), responsible for the PLA's ground forces, is no longer automatically in charge of war zones or higher headquarters functions. At the same time, the PLAA has steadily modernized its capabilities, incorporating both new equipment and a new organization. It has shifted from a division-based structure toward a brigade-based one and has been improving its mobility, including heliborne infantry and fire support.⁴ These forces are increasingly equipped with modern armored fighting vehicles, air defenses, both tube and rocket artillery, and electronic support equipment.

The PLA Navy (PLAN) is Asia's largest navy. It now also outnumbers the U.S. Navy, with "360 battle force ships, compared with a projected total of 297 for the U.S. Navy at the end of FY2020."⁵ Although the total number of ships has dropped, the PLAN has fielded increasingly sophisticated and capable multi-role ships. Multiple classes of surface combatants are now in series production, including the Type 055 cruiser and the Type 052C and Type 052D guided missile destroyers, each of which fields long-range surface-to-air (SAM) and anti-ship cruise missile systems, as well as the Type 054 frigate and Type 056 corvette.

The PLAN has similarly been modernizing its submarine force. Since 2000, the PLAN has consistently fielded between 50 and 60 diesel-electric submarines, but the age and capability of the force have been improving as older boats, especially 1950s-vintage *Romeo*-class boats, are replaced with newer designs. These include a dozen *Kilo*-class submarines purchased from Russia and domestically designed and manufactured *Song* and *Yuan* classes. All of these are believed to be capable of firing both torpedoes and anti-ship cruise missiles.⁶ The Chinese have also developed variants of the *Yuan*, with an air-independent propulsion (AIP) system that reduces the boats' vulnerability by removing the need to use noisy diesel engines to recharge batteries.⁷

The PLAN has been expanding its amphibious assault capabilities as well. The Chinese have announced a plan to triple the size of the PLA naval infantry force (their counterpart to the U.S. Marine Corps) from two brigades totaling 10,000 troops to seven brigades with 30,000 personnel.⁸ To move this force, the Chinese have begun to build more amphibious assault ships, including Type 071 amphibious transport docks.⁹ Each can carry about 800 naval infantrymen and move them to shore by means of four air-cushion landing craft and four helicopters.

Supporting these expanded naval combat forces is a growing fleet of support and logistics vessels. The 2010 PRC defense white paper noted the accelerated construction of "large support vessels." It also specifically noted that the navy is exploring "new methods of logistics support for sustaining long-time maritime missions."¹⁰ These include tankers and fast combat support ships that extend the range of Chinese surface groups and allow them to operate for more prolonged periods away from main ports. Chinese naval task forces dispatched to the Gulf of Aden have typically included such vessels.

The PLAN has also been expanding its naval aviation capabilities, the most publicized element of which has been the growing Chinese carrier fleet. This currently includes not only

the *Liaoning*, purchased from Ukraine over a decade ago, but a domestically produced copy that recently completed its first exercise.¹¹ Both of these ships have ski jumps for their air wing, but the Chinese are also building several conventional takeoff/barrier landing (CATOBAR) carriers (like American or French aircraft carriers) that will employ catapults and therefore allow their air complement to carry more ordinance and/or fuel.¹²

The PLAN's land-based element is modernizing as well, with a variety of long-range strike aircraft, anti-ship cruise missiles, and unmanned aerial vehicles (UAVs) entering the inventory. In addition to more modern versions of the H-6 twin-engine bombers (a version of the Soviet/Russian Tu-16 Badger), the PLAN's Naval Aviation force has added a range of other strike aircraft to its inventory. These include the JH-7/FBC-1 Flying Leopard, which can carry between two and four YJ-82 anti-ship cruise missiles, and the Su-30 strike fighter.

The PLA Air Force (PLAAF), with more than 1,700 combat aircraft, is Asia's largest air force. It has shifted steadily from a force focused on homeland air defense to one that is capable of power projection, including long-range precision strikes against both land and maritime targets.

The PLAAF currently has more than 700 fourth-generation fighters that are comparable to the U.S. F-15, F-16, and F-18. They include the domestically designed and produced J-10 as well as the Su-27/Su-30/J-11 system, which is comparable to the F-15 or F-18 and dominates both the fighter and strike missions.¹³ China is also believed to be preparing to field two stealthy fifth-generation fighter designs. The J-20 is the larger aircraft and resembles the American F-22 fighter. The J-31 appears to resemble the F-35 but with two engines rather than one. The production of advanced combat aircraft engines remains one of the greatest challenges to Chinese fighter design.

The PLAAF is also deploying increasing numbers of H-6 bombers, which can undertake longer-range strike operations including

operations employing land-attack cruise missiles. Although the H-6, like the American B-52 and Russian Tu-95, is a 1950s-era design copied from the Soviet-era Tu-16 Badger bomber, the latest versions (H-6K) are equipped with updated electronics and engines and are made of carbon composites. The 2020 U.S. Department of Defense (DOD) report to Congress on China's military also notes that China is developing a flying wing-type stealth bomber that is probably similar to the U.S. B-2.¹⁴

Equally important, the PLAAF has been introducing a variety of support aircraft, including airborne early warning (AEW), command and control (C2), and electronic warfare (EW) aircraft. These systems field state-of-the-art radars and electronic surveillance systems that allow Chinese air commanders to detect potential targets, including low-flying aircraft and cruise missiles, more quickly and gather additional intelligence on adversary radars and electronic emissions. China's combat aircraft are also increasingly capable of undertaking mid-air refueling, which allows them to conduct extended, sustained operations, and the Chinese aerial tanker fleet, which is based on the H-6 aircraft, has been expanding.

At the biennial Zhuhai Air Show, Chinese companies have displayed a variety of unmanned aerial vehicles that reflect substantial investments and research and development efforts. The surveillance and armed UAV systems include the Xianglong (Soaring Dragon) and Sky Saber systems. The 2019 DOD report on Chinese capabilities stated that China had tested a cargo drone, the AT-200, capable of carrying 1.5 tons of cargo.¹⁵ Chinese UAVs have been included in various military parades over the past several years, suggesting that they are being incorporated into Chinese forces, and the 2018 DOD report on Chinese capabilities stated that "China's development, production and deployment of domestically-developed reconnaissance and combat UAVs continues to expand."¹⁶

The PLAAF is also responsible for the Chinese homeland's strategic air defenses. Its array of surface-to-air missile batteries is one

of the largest in the world and includes the Russian S-300 (SA-10B/SA-20) and its Chinese counterpart, the Hongqi-9 long-range SAM. In 2018, the Russians began to deliver the S-400 series of long-range SAMs to China. These mark a substantial improvement in PLAAF air defense capabilities, as the S-400 has both anti-aircraft and anti-missile capabilities.¹⁷ China has deployed these SAM systems in a dense, overlapping belt along its coast, protecting the nation's economic center of gravity. Key industrial and military centers such as Beijing are also heavily defended by SAM systems.

China's airborne forces are part of the PLAAF. The 15th Airborne Corps has been reorganized from three airborne divisions to six airborne brigades in addition to a special operations brigade, an aviation brigade, and a support brigade. The force has been incorporating indigenously developed airborne mechanized combat vehicles for the past decade, giving them more mobility and a better ability to engage armored forces.

Nuclear Capability. Chinese nuclear forces are the responsibility of the PLA Rocket Forces (PLARF), one of the three new services created on December 31, 2015. China's nuclear ballistic missile forces include land-based missiles with a range of 13,000 kilometers that can reach the U.S. (CSS-4) and submarine-based missiles that can reach the U.S. when the submarine is deployed within missile range.

The PRC became a nuclear power in 1964 when it exploded its first atomic bomb as part of its "two bombs, one satellite" effort. China then exploded its first thermonuclear bomb in 1967 and orbited its first satellite in 1970, demonstrating the capability to build a delivery system that can reach the ends of the Earth. China chose to rely primarily on a land-based nuclear deterrent instead of developing two or three different basing systems as the United States did.

Unlike the United States or the Soviet Union, China chose to pursue only a minimal nuclear deterrent. The PRC fielded only a small number of nuclear weapons: 100–150 weapons on medium-range ballistic missiles

and approximately 60 intercontinental ballistic missiles (ICBMs).¹⁸ Its only ballistic missile submarine (SSBN) conducted relatively few deterrence patrols (perhaps none),¹⁹ and its first-generation submarine-launched ballistic missile (SLBM), the JL-1, if it ever attained full operational capability had limited reach. The JL-1's 1,700-kilometer range makes it comparable to the first-generation Polaris A1 missile fielded by the U.S. in the 1960s.

While China's nuclear force remained stable for several decades, it has been part of the modernization effort of the past 20 years. The result has been modernization and some expansion of the Chinese nuclear deterrent. The core of China's ICBM force is the DF-31 series, a solid-fueled, road-mobile system, along with a growing number of longer-range, road-mobile DF-41 missiles that may already be in the PLA operational inventory. The DF-41 may be deployed with multiple independently targetable reentry vehicles (MIRVs).²⁰ China's medium-range nuclear forces have similarly shifted to mobile, solid-rocket systems so that they are both more survivable and more easily maintained.

This past year has seen a sudden inflation in the number of strategic nuclear warheads available to the PLA Rocket Force. Imagery analysts at several think tanks discovered at least three fields of silos under construction in western China.²¹ Each appears to contain around 100 silos, which means that China is potentially expanding its land-based nuclear deterrent component by over an order of magnitude.

Notably, the Chinese are also expanding their ballistic missile submarine fleet. Replacing the one Type 092 *Xia*-class SSBN are perhaps six Type 094 *Jin*-class SSBNs, four of which are already operational. They will likely be equipped with the new, longer-range JL-2 SLBM.²² Such a system would give the PRC a secure second-strike capability, substantially enhancing its nuclear deterrent.

There is some possibility that the Chinese nuclear arsenal now contains land-attack cruise missiles. The CJ-20, a long-range, air-launched cruise missile carried on China's

H-6 bomber, may be nuclear tipped, although there is not much evidence that China has pursued such a capability. China is also believed to be working on a cruise missile submarine that, if equipped with nuclear cruise missiles, would further expand the range of its nuclear attack options.²³

As a result of its modernization efforts, China's nuclear forces appear to be shifting from a minimal deterrent posture, suited only to responding to an attack and even then with only limited numbers, to a more robust but still limited deterrent posture. While the PRC will still likely field fewer nuclear weapons than either the United States or Russia, it will field a more modern and diverse set of capabilities than India, Pakistan, or North Korea, its nuclear-armed neighbors, are capable of fielding. If there are corresponding changes in doctrine, modernization will enable China to engage in limited nuclear options in the event of a conflict.

This assessment changes, however, if the missiles going into the newly discovered silos are equipped with MIRVs (multiple independently targetable reentry vehicles). If the Chinese place five MIRVs atop each missile, then 300 new ICBMs would have some 1,500 warheads—equivalent to the U.S. and Russian numbers allowed under New START. Even if there are fewer than 300 ICBMs, the new SLBMs and new bombers would still mean that within a few years, China could field as large a nuclear force as the United States or Russia is capable of fielding.

In addition to strategic nuclear forces, the PLARF has responsibility for medium-range and intermediate-range ballistic missile (MRBM and IRBM) forces. These include the DF-21 and DF-26 missiles, which can reach as far as Guam and southern India.²⁴ It is believed that Chinese missile brigades equipped with these systems may have both nuclear and conventional responsibilities, making any deployment from garrison much more ambiguous from a stability perspective. The expansion of these forces also raises questions about the total number of Chinese nuclear warheads.

Cyber and Space Capabilities. The major 2015 reorganization of the PLA included creation of the PLA Strategic Support Force (PLASSF), which brings the Chinese military's electronic, network (including cyber), and space warfare forces under a single service umbrella. Previously, these capabilities had been embedded in different departments across the PLA's General Staff Department and General Armaments Department. By consolidating them into a single service, the PLA has created a Chinese "information warfare" force that is responsible for offensive and defensive operations in the electromagnetic and space domains.

Chinese network warfare forces are known to have conducted a variety of cyber and network reconnaissance operations as well as cyber economic espionage. In 2014, the U.S. Department of Justice charged PLA officers from Unit 61398, then of the General Staff Department's 3rd Department, with theft of intellectual property and implanting of malware in various commercial firms.²⁵ Members of that unit are thought also to be part of Advanced Persistent Threat-1, a group of computer hackers believed to be operating on behalf of a nation-state rather than a criminal group. In 2020, the Department of Justice charged a number of PLA officers with one of the largest breaches in history: stealing the credit ratings and records of 147 million people from Equifax.²⁶

Chinese space capabilities gained public prominence in 2007 when the PLA conducted an anti-satellite (ASAT) test in low-Earth orbit against a defunct Chinese weather satellite. The test became one of the worst debris-generating incidents of the space age, with several thousand pieces of debris generated, many of which will remain in orbit for more than a century. However, the PRC has been conducting space operations since 1970 when it first orbited a satellite.

Equally important, Chinese counter-space efforts have been expanding steadily. The PLA not only has tested ASATs against low-Earth orbit systems, but also is believed to have

tested a system designed to attack targets at geosynchronous orbit (GEO), approximately 22,000 miles above the Earth. As many vital satellites are at GEO, including communications and missile early-warning systems, China's ability to target such systems constitutes a major threat.

The creation of the PLASSF, incorporating counter-space forces, reflects the movement of counter-space systems, including direct-ascent ASATs, out of the testing phase to fielding with units. A recent report from the U.S. National Air and Space Intelligence Center (NASIC) notes that Chinese units are now training with anti-satellite missiles.²⁷

Threats to the Commons

The U.S. has critical sea, air, space, and cyber interests at stake in the East Asia and South Asia international common spaces. These interests include an economic interest in the free flow of commerce and the military use of the commons to safeguard America's own security and contribute to the security of its allies and partners.

Washington has long provided the security backbone in these areas, and this in turn has supported the region's remarkable economic development. However, China is taking increasingly assertive steps to secure its own interests in these areas independent of U.S. efforts to maintain freedom of the commons for all in the region. Given this behavior, which includes the construction of islands atop previously submerged features, two things seem obvious: China and the United States do not share a common conception of international space, and China is actively seeking to undermine American predominance in securing international common spaces.

In addition, as China expands its naval capabilities, it will be present farther and farther away from its home shores. China has now established its first formal overseas military base, having initialed an agreement with the government of Djibouti in January 2017.⁵¹

Dangerous Behavior in the Maritime and Airspace Common Spaces. The

aggressiveness of the Chinese navy, maritime law enforcement forces, and air forces in and over the waters of the East China Sea and South China Sea, coupled with ambiguous, extralegal territorial claims and assertion of control there, poses an incipient threat to American and overlapping allied interests. Chinese military writings emphasize the importance of establishing dominance of the air and maritime domains in any future conflict.

Although the Chinese do not necessarily have sufficient capacity to deny the U.S. the ability to operate in local waters and airspace, the ability of the U.S. to take control at acceptable costs in the early stages of a conflict has become a matter of greater debate.²⁸ As its capabilities have expanded, China has increasingly challenged long-standing rivals Vietnam and the Philippines. It also has begun to push toward Indonesia's Natuna Islands and into waters claimed by Malaysia.

It is unclear whether China is yet in a position to enforce an air defense identification zone (ADIZ) consistently, but the steady two-decade improvement of the PLAAF and PLAN naval aviation will eventually provide the necessary capabilities. Chinese observations of recent conflicts, including wars in the Persian Gulf, the Balkans, and Afghanistan, have emphasized the growing role of airpower and missiles in conducting "non-contact, non-linear, non-symmetrical" warfare.²⁹ This growing parity, if not superiority, constitutes a radical shift from the Cold War era, when the U.S., with its allies, clearly would have dominated air and naval operations in the Pacific.

China has also begun to employ non-traditional methods of challenging foreign military operations in what Beijing regards as its territorial waters and airspace. It has employed lasers, for example, against foreign air and naval platforms, endangering pilots and sailors by threatening to blind them.³⁰

Increased Military Space Activity. One of the key force multipliers for the United States is its extensive array of space-based assets. Through its various satellite constellations, the U.S. military can track opponents,

coordinate friendly forces, engage in precision strikes against enemy forces, and conduct battle-damage assessments so that its munitions are expended efficiently.

Because the American military is expeditionary (i.e., its wars are fought far from the homeland), its reliance on space-based systems is greater than that of many other militaries. Consequently, it requires global rather than regional reconnaissance, communications and data transmission, and meteorological information and support. At this point, only space-based systems can provide this sort of information on a real-time basis. No other country is capable of leveraging space as the U.S. does, and that is a major advantage. However, this heavy reliance on space systems is also a key American vulnerability.

China fields an array of space capabilities, including its own BeiDou/Compass system of navigation and timing satellites, and has claimed a capacity to refuel satellites.³¹ It has four satellite launch centers. China's interest in space dominance includes not only accessing space, but also denying opponents the ability to do the same. As one Chinese assessment notes, space capabilities provided 70 percent of battlefield communications, over 80 percent of battlefield reconnaissance and surveillance, and 100 percent of meteorological information for American operations in Kosovo. Moreover, 98 percent of precision munitions relied on space for guidance information. In fact, "[i]t may be said that America's victory in the Kosovo War could not [have been] achieved without fully exploiting space."³²

To this end, the PLA has been developing a range of anti-satellite capabilities that include both hard-kill and soft-kill systems. The former include direct-ascent kinetic-kill vehicles (DA-KKV) such as the system famously tested in 2007, but they also include more advanced systems that are believed to be capable of reaching targets in mid-Earth orbit and even geosynchronous orbit.³³ The latter include anti-satellite lasers for either dazzling or blinding purposes.³⁴ This is consistent with PLA doctrinal writings, which emphasize the

need to control space in future conflicts. "Securing space dominance has already become the prerequisite for establishing information, air, and maritime dominance," says one Chinese teaching manual, "and will directly affect the course and outcome of wars."³⁵

Soft-kill attacks need not come only from dedicated weapons, however. The case of Galaxy-15, a communications satellite owned by Intelsat Corporation, showed how a satellite could disrupt communications simply by always being in "switched on" mode.³⁶ Before it was finally brought under control, it had drifted through a portion of the geosynchronous belt, forcing other satellite owners to move their assets and juggle frequencies. A deliberate such attempt by China (or any other country) could prove far harder to handle, especially if conducted in conjunction with attacks by kinetic systems or directed-energy weapons.

Most recently, China has landed an unmanned probe at the lunar south pole on the far side of the Moon. This is a major accomplishment because the probe is the first spacecraft ever to land at either of the Moon's poles. To support this mission, the Chinese deployed a data relay satellite to Lagrange Point-2, one of five points where the gravity wells of the Earth and Sun "cancel out" each other, allowing a satellite to remain in a relatively fixed location with minimal fuel consumption. While the satellite itself may or may not have military roles, the deployment highlights that China will now be using the enormous volume of cis-lunar space (the region between the Earth and the Moon) for various deployments. This will greatly complicate American space situational awareness efforts, as it forces the U.S. to monitor a vastly greater area of space for possible Chinese spacecraft. The Chinese Chang'e-5 lunar sample retrieval mission in 2020 and the recent Chinese landing on Mars underscore China's effort to move beyond Earth orbit to cis-lunar and interplanetary space.

Cyber Activities and the Electromagnetic Domain. As far back as 2013, the Verizon Risk Center identified China as the "top external actor from which [computer] breaches

emanated, representing 30 percent of cases where country-of-origin could be determined.”³⁷ Given the difficulties of attribution, country of origin should not necessarily be conflated with perpetrator, but forensic efforts have associated at least one Chinese military unit with cyber intrusions, albeit many years ago.³⁸ The Verizon report similarly concluded that China was the source of 95 percent of state-sponsored cyber espionage attacks. Since the 2015 summit meeting between Chinese President Xi Jinping and U.S. President Barack Obama, during which the two sides reached an understanding to reduce cyber economic espionage, Chinese cyber actions have shifted. Although the overall level of activity appears to be unabated, the Chinese seem to have moved toward more focused attacks mounted from new sites.

China’s cyber espionage efforts are often aimed at economic targets, reflecting China’s much more holistic view of both security and information. Rather than creating an artificial dividing line between military security and civilian security, much less information, the PLA plays a role in supporting both aspects and seeks to obtain economic intellectual property as well as military electronic information.

This is not to suggest that the PLA has not emphasized the military importance of cyber warfare. Chinese military writings since the 1990s have emphasized a fundamental transformation in global military affairs. Future wars will be conducted through joint operations involving multiple services, not through combined operations focused on multiple branches within a single service, and will span not only the traditional land, sea, and air domains, but also outer space and cyberspace. The latter two arenas will be of special importance because warfare has shifted from an effort to establish material dominance (characteristic of industrial age warfare) to establishing information dominance. This is due to the rise of the information age and the resulting introduction of information technology into all areas of military operations.

Consequently, according to PLA analysis, future wars will most likely be “local wars under informationized conditions.” That is, they will be wars in which information and information technology will be both widely applied and a key basis of victory. The ability to gather, transmit, analyze, manage, and exploit information will be central to winning such wars: The side that is able to do these things more accurately and more quickly will be the side that wins. This means that future conflicts will no longer be determined by platform-versus-platform performance and not even by system against system: Conflicts are now clashes between rival systems of systems.³⁹

Chinese military writings suggest that a great deal of attention has been focused on developing an integrated computer network and electronic warfare (INEW) capability. This would allow the PLA to reconnoiter a potential adversary’s computer systems in peacetime, influence opponent decision-makers by threatening those same systems in times of crisis, and disrupt or destroy information networks and systems by cyber and electronic warfare means in the event of conflict. INEW capabilities would complement psychological warfare and physical attack efforts to secure “information dominance,” which Chinese military writings emphasize as essential for fighting and winning future wars.

It is essential to recognize, however, that the PLA views computer network operations as part of information operations, or information combat. Information operations are specific operational activities that are associated with striving to establish information dominance. They are conducted in both peacetime and wartime with the peacetime focus on collecting information, improving its flow and application, influencing opposing decision-making, and effecting information deterrence.

Information operations involve four mission areas:

- **Command and Control Missions.** An essential part of information operations is the ability of commanders to control joint

operations by disparate forces. Thus, command, control, communications, computers, intelligence, surveillance, and reconnaissance structures constitute a key part of information operations, providing the means for collecting, transmitting, and managing information.

- **Offensive Information Missions.** These are intended to disrupt the enemy's battlefield command and control systems and communications networks, as well as to strike the enemy's psychological defenses.
- **Defensive Information Missions.** Such missions are aimed at ensuring the survival and continued operation of information systems. They include deterring an opponent from attacking one's own information systems, concealing information, and combating attacks when they do occur.
- **Information Support and Information-Safeguarding Missions.** The ability to provide the myriad types of information necessary to support extensive joint operations and to do so on a continuous basis is essential to their success.⁴⁰

Computer network operations are integral to all four of these overall mission areas. They can include both strategic and battlefield network operations and can incorporate both offensive and defensive measures. They also include protection not only of data, but also of information hardware and operating software.

Computer network operations will not stand alone, however; they will be integrated with electronic warfare operations as reflected in the phrase "network and electronics unified." Electronic warfare operations are aimed at weakening or destroying enemy electronic facilities and systems while defending one's own.⁴¹ The combination of electronic and computer network attacks will produce synergies that affect everything from finding and assessing the adversary, to locating one's own forces, to weapons guidance, to logistical

support and command and control. The creation of the PLASSF is intended to integrate these forces and make them more complementary and effective in future "local wars under informationized conditions."

Threat of Regional War

Three issues, all involving China, threaten American interests and embody the "general threat of regional war" noted at the outset of this section: the status of Taiwan, the escalation of maritime and territorial disputes, and border conflict with India.

Taiwan. China's long-standing threat to end the de facto independence of Taiwan and ultimately to bring it under the authority of Beijing—by force if necessary—is both a threat to a major American security partner and a threat to the American interest in peace and stability in the Western Pacific.

After easing for eight years, tensions across the Taiwan Strait have resumed as a result of Beijing's reaction to the outcome of Taiwan's 2016 presidential election. Beijing has suspended most direct government-to-government discussions with Taipei and is using a variety of aid and investment efforts to deprive Taiwan of its remaining diplomatic partners.

Beijing has also undertaken significantly escalated military activities directed at Taiwan. For example:

- In 2021, 20 Chinese aircraft, including fighters, bombers, and support aircraft, conducted the largest single incursion into Taiwanese airspace.⁴²
- Chinese fighters, along with airborne early warning aircraft, have increased their exercises southwest of Taiwan, demonstrating a growing ability to conduct flexible air operations and reduced reliance on ground-based control.⁴³
- Through mid-April of 2021, China had already flown 260 unnotified sorties over Taiwan's ADIZ, compared to the record number of 380 it flew in 2020.⁴⁴

- The PLA has also undertaken sustained joint exercises to simulate extended air operations, employing both air and naval forces, including its aircraft carriers.⁴⁵

These activities continued unabated and in some ways even intensified in the wake of China's struggle with COVID-19.⁴⁶

Regardless of the state of the relationship at any given time, Chinese leaders from Deng Xiaoping and Mao Zedong to Xi Jinping have consistently emphasized the importance of ultimately reclaiming Taiwan. The island—along with Tibet—is the clearest example of a geographical “core interest” in Chinese policy. China has never renounced the use of force, and it continues to employ political warfare against Taiwan's political and military leadership.

For the Chinese leadership, the failure to effect unification, whether peacefully or through the use of force, would reflect fundamental political weakness in the PRC. For this reason, China's leaders cannot back away from the stance of having to unify the island with the mainland, and the island remains an essential part of the PLA's “new historic missions,” shaping its acquisitions and military planning.

It is widely posited that China's anti-access/area-denial (A2/AD) strategy—the deployment of an array of overlapping capabilities, including anti-ship ballistic missiles (ASBMs), submarines, and long-range cruise missiles, satellites, and cyber weapons—is aimed largely at forestalling American intervention in support of friends and allies in the Western Pacific, including Taiwan. By holding at risk key American platforms and systems (e.g., aircraft carriers), the Chinese seek to delay or even deter American intervention in support of key friends and allies, thereby allowing the PRC to achieve a *fait accompli*. The growth of China's military capabilities is specifically oriented toward countering America's ability to assist in the defense of Taiwan.

Moreover, China's efforts to reclaim Taiwan are not limited to overt military means. The “three warfares” highlight Chinese political

warfare methods, including legal warfare/lawfare, public opinion warfare, and psychological warfare. The PRC employs such approaches to undermine both Taiwan's will to resist and America's willingness to support Taiwan. The Chinese goal would be to “win without fighting”—to take Taiwan without firing a shot or with only minimal resistance before the United States could organize an effective response.

Escalation of Maritime and Territorial Disputes. Because the PRC and other countries in the region see active disputes over the East and South China Seas not as differences regarding the administration of international common spaces, but rather as matters of territorial sovereignty, there exists the threat of armed conflict between China and American allies who are also claimants, particularly Japan and the Philippines.

Because its economic center of gravity is now in the coastal region, China has had to emphasize maritime power to defend key assets and areas. This is exacerbated by China's status as the world's foremost trading state. China increasingly depends on the seas for its economic well-being. Its factories are powered increasingly by imported oil, and its diet contains a growing percentage of imported food. China relies on the seas to move its products to markets. Consequently, it not only has steadily expanded its maritime power, including its merchant marine and maritime law enforcement capabilities, but also has acted to secure the “near seas” as a Chinese preserve.

Beijing prefers to accomplish its objectives quietly and through nonmilitary means. In both the East China Sea and the South China Sea, China has sought to exploit “gray zones,” gaining control incrementally and deterring others without resorting to the lethal use of force. It uses military and economic threats, bombastic language, and enforcement through legal warfare (including the employment of Chinese maritime law enforcement vessels) as well as military bullying. Chinese paramilitary-implemented, military-backed encroachment in support of expansive extralegal claims could lead to an unplanned armed clash.

The growing tensions between China and Japan and among a number of claimants in the South China Sea are especially risky. In the former case, the most proximate cause is the dispute over the Senkakus.

China has intensified its efforts to assert claims of sovereignty over the Senkaku Islands of Japan in the East China Sea. Beijing asserts both exclusive economic rights within the disputed waters and recognition of “historic” rights to dominate and control those areas as part of its territory.⁴⁷ Chinese fishing boats (often believed to be elements of the Chinese maritime militia) and Chinese Coast Guard (CCG) vessels have been encroaching steadily on the territorial waters within 12 nautical miles of the uninhabited islands. In 2020, CCG or other government vessels repeatedly entered the waters around the Senkakus.⁴⁸ In the summer of 2016, China deployed a naval unit (as opposed to the CCG) into the area.⁴⁹

Beijing’s 2013 ADIZ declaration was just part of a broader Chinese pattern of using intimidation and coercion to assert expansive extralegal claims of sovereignty and/or control incrementally. For example:

- In June 2016, a Chinese fighter made an “unsafe” pass near a U.S. RC-135 reconnaissance aircraft in the East China Sea area.
- In March 2017, Chinese authorities warned the crew of an American B-1B bomber operating in the area of the ADIZ that they were flying illegally in PRC airspace. In response to the incident, the Chinese Foreign Ministry called for the U.S. to respect the ADIZ.⁵⁰
- In May 2018, the Chinese intercepted an American WC-135, also over the East China Sea.⁵¹

There have been no publicly reported, ADIZ-related confrontations since then.

In the South China Sea, overlapping Chinese, Bruneian, Philippine, Malaysian, Vietnamese,

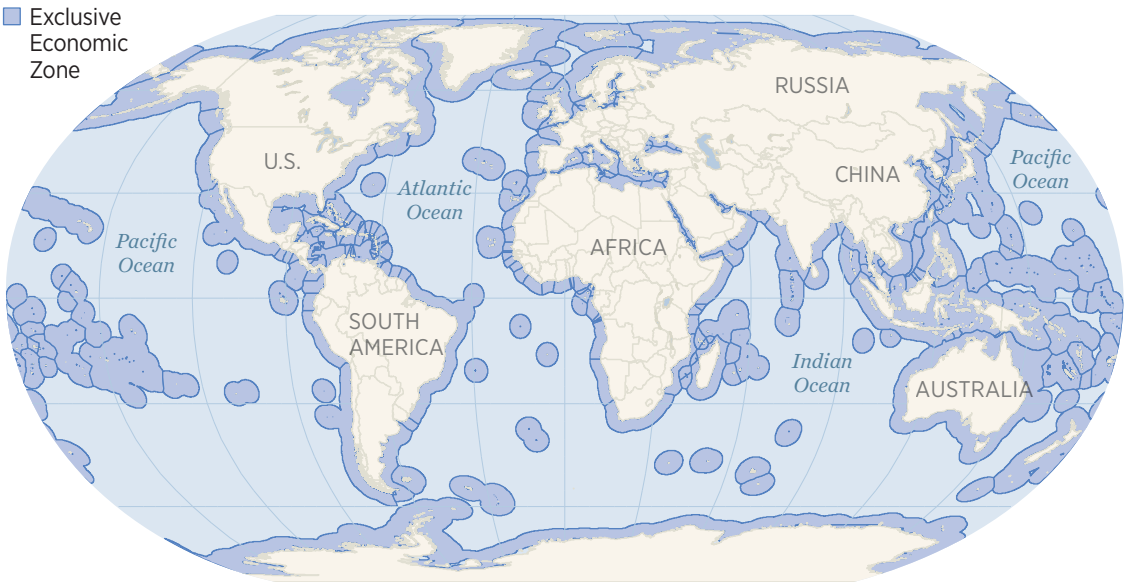
and Taiwanese claims raise the prospect of confrontation. This volatile situation has led to a variety of confrontations between China and other claimants, as well as with Indonesia, which is not claiming territory or rights disputed by anyone except (occasionally) China.

China–Vietnam tensions in the region, for example, were once again on display in 2020 when CCG vessels twice rammed and sank Vietnamese fishing boats near the disputed Paracel islands.⁵² Vietnam has also protested China’s decision to create additional administrative regions for the South China Sea, one centered on the Paracels and the other centered on the Spratlys.⁵³ This is part of Beijing’s “legal warfare” efforts, which employ legal and administrative measures to underscore China’s claimed control of the South China Sea region. For this reason, conflict often occurs around Chinese enforcement of unilaterally determined and announced fishing bans.⁵⁴

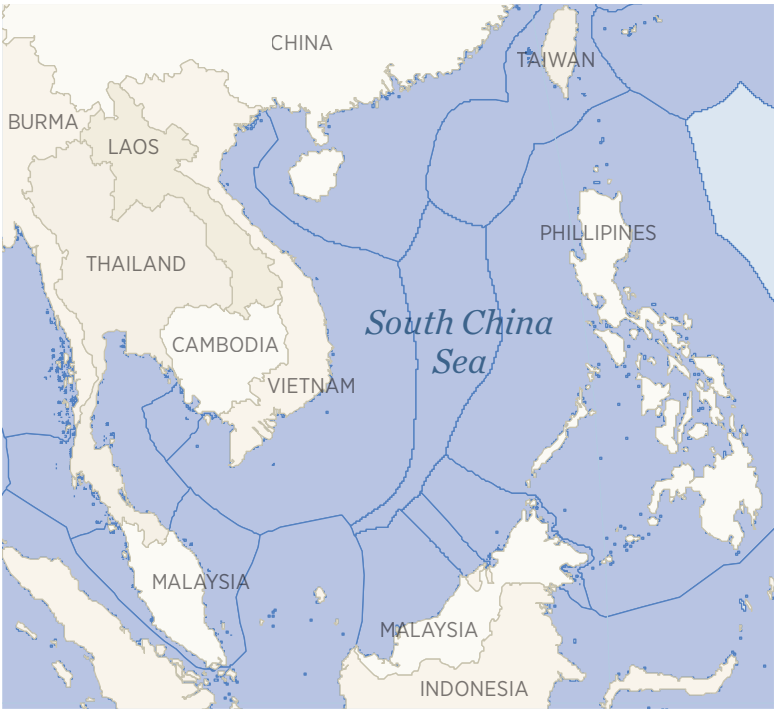
Because of the relationship between the Philippines and the United States, tensions between Beijing and Manila are the most likely to lead to American involvement in these disputes. There have been a number of incidents going back to the 1990s. The most contentious occurred in 2012 when a Philippine naval ship operating on behalf of the country’s coast guard challenged private Chinese poachers in waters around Scarborough Shoal. The resulting escalation left Chinese government ships in control of the shoal, after which the Philippines successfully challenged Beijing in the Permanent Court of Arbitration regarding its rights under the U.N. Convention on the Law of the Sea (UNCLOS). There is no indication that the Chinese have reclaimed land around the shoal as they did in the Spratlys, but they continue to control access to the reef, and the presence of the Chinese Coast Guard remains a source of confrontation.⁵⁵

In March and April of 2021, a similar dispute seemed to be simmering around Whitsun Reef in the Spratlys. The presence there of more than two hundred Chinese fishing boats, among them known assets of China’s maritime militia,⁵⁶ sparked protests from Manila. After a

The Scope of Exclusive Economic Zones (EEZs)



As shown in the map above, EEZs and other waters under national jurisdiction account for 40 percent of the world's oceans. U.S. freedom of navigation worldwide would be compromised if national governments were granted expansive authority to restrict foreign militaries from operating in their EEZs. The South China Sea, virtually all of which is covered by various EEZ claims (see map at right), has become a particular flashpoint as China has sought to restrict freedom of navigation for U.S. military vessels there.



SOURCE: Heritage Foundation research.

 [heritage.org](https://www.heritage.org)

Exclusive Economic Zone (EEZ) Claims in the South China Sea



SOURCE: "China Has Militarised the South China Sea and Got Away with It," *The Economist*, June 23, 2018, <https://www.economist.com/asia/2018/06/21/china-has-militarised-the-south-china-sea-and-got-away-with-it> (accessed July 23, 2021).

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stay of a few weeks—which Beijing claimed was necessary because of the poor weather—most of the ships departed. The unprecedented gathering of fishing boats and maritime militia could be an attempt to establish a basis within the Philippines exclusive economic zone (EEZ) for a subsequent return backed by the Chinese Coast Guard.

In all of these cases, the situation is exacerbated by rising Chinese nationalism.⁵⁷ In the

face of persistent economic challenges, nationalist themes are becoming an increasingly strong undercurrent and affecting policymaking. Although the nationalist phenomenon is not new, it is gaining force and complicating efforts to maintain regional stability.

Governments may choose to exploit nationalism for domestic political purposes, but they also run the risk of being unable to control the genie that they have released. Nationalist

rhetoric is mutually reinforcing, which makes countries less likely to back down than in the past. The increasing power that the Internet and social media provide to the populace, largely outside of government control, adds elements of unpredictability to future clashes. China's refusal to accept the 2016 Permanent Court of Arbitration findings, which were overwhelmingly in favor of the Philippines, despite both Chinese and Philippine accession to UNCLOS is a partial reflection of such trends.

In case of armed conflict between China and the Philippines or between China and Japan, either by intention or as a result of an accidental incident at sea, the U.S. could be required to exercise its treaty commitments.⁵⁸ Escalation of a direct U.S.–China incident is also not unthinkable. Keeping an inadvertent incident from escalating into a broader military confrontation would be difficult. This is particularly true in the East and South China Seas, where naval as well as civilian law enforcement vessels from both China and the U.S. operate in what the U.S. considers to be international waters.

The most significant development in the South China Sea during the past three years has been Chinese reclamation and militarization of seven artificial islands or outposts. In 2015, President Xi promised President Obama that China had no intention of militarizing the islands. That pledge has never been honored. In fact, as described by Admiral Harry Harris, Commander, U.S. Pacific Command, in his April 2017 posture statement to the Senate Committee on Armed Services:

China's military-specific construction in the Spratly islands includes the construction of 72 fighter aircraft hangars—which could support three fighter regiments—and about ten larger hangars that could support larger airframes, such as bombers or special mission aircraft. All of these hangars should be completed this year. During the initial phases of construction China emplaced tank farms, presumably for fuel and water, at Fiery Cross, Mischief

and Subi reefs. These could support substantial numbers of personnel as well as deployed aircraft and/or ships. All seven outposts are armed with a large number of artillery and gun systems, ostensibly for defensive missions. The recent identification of buildings that appear to have been built specifically to house long-range surface-to-air missiles is the latest indication China intends to deploy military systems to the Spratlys.⁵⁹

There have been additional developments since the admiral's statement,⁶⁰ but the DOD's 2019 annual report on the Chinese military found no new militarization,⁶¹ which would seem to suggest that the process has been completed.

There is the possibility that China will ultimately declare an ADIZ above the South China Sea in an effort to assert its authority over the entire area.⁶² There also are concerns that under the right circumstances, China will take action against vulnerable targets like Philippines-occupied Second Thomas Shoal or Reed Bank, where a Chinese fishing boat in 2019 rammed and sank a Philippine boat, causing a controversy in Manila. There is also consistent speculation in the Philippines about when the Chinese will start reclamation work at Scarborough. This development in particular would facilitate the physical assertion of Beijing's claims and enforcement of an ADIZ, regardless of the UNCLOS award.

Border Conflict with India. The possibility of armed conflict between India and China, while currently remote, poses an indirect threat to U.S. interests because it could disrupt the territorial status quo and raise nuclear tensions in the region. A border conflict between India and China could also prompt Pakistan to try to take advantage of the situation, further contributing to regional instability.

Long-standing border disputes that led to a Sino–Indian war in 1962 have again become a flashpoint in recent years. In April 2013, the most serious border incident between India and China in more than two decades occurred

Chinese Fault Lines



China-India Border. The Line of Actual Control represents one of the world's longest disputed borders and has been the site of several standoffs between the Chinese and Indian militaries in recent years, including a border crisis in 2020 that resulted in the first casualties from hostilities at the border in more than 40 years.

East China Sea. China claims the disputed Senkaku/Diaoyu Islands, which are currently administered by Japan. In recent years, Chinese aircraft

and naval vessels have entered the airspace and territorial sea around the islands with growing frequency.

Taiwan. The Republic of China on Taiwan claims sovereignty. The People's Republic of China disputes this and regularly conducts provocative military maneuvers near Taiwan.

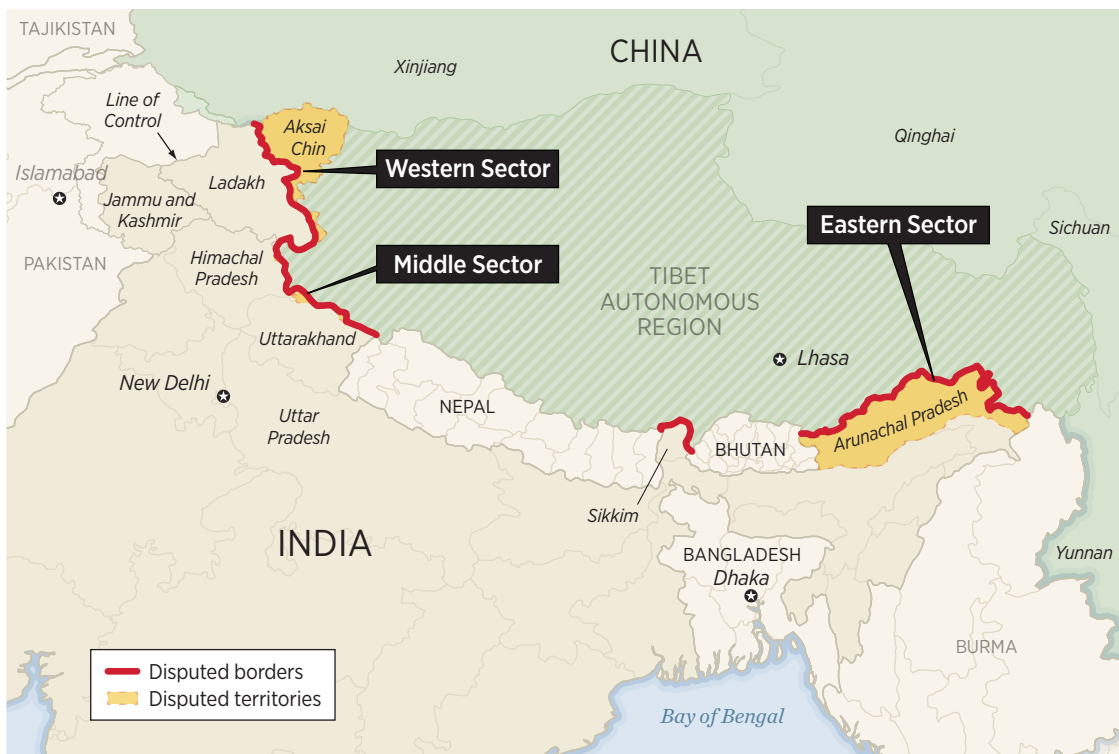
South China Sea. The South China Sea hosts several territorial disputes between China and Taiwan and its

Southeast Asian neighbors. China's unlawful claims in the sea and attempts to restrict freedom of navigation there have also produced tensions with the U.S., which has sent aircraft and naval vessels through the South China Sea to signal its objections to the nature of China's claims. This has resulted in a number of confrontations between Chinese and U.S. vessels.

SOURCE: Heritage Foundation research.

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Disputed Borders Between India and China



Western Sector. Aksai Chin, a barren plateau that was part of the former princely state of Jammu and Kashmir, has been administered by the Chinese since they seized control of the territory in the 1962 Sino-Indian border conflict. One of the main causes of that war was India's discovery of a road China had built through the region, which India considered its territory.

Middle Sector. The Middle Sector, where the Indian states of Uttarakhand and Himachal Pradesh meet the Tibet Autonomous Region, is the least contentious of the three main disputed "sectors," with the least amount of territory contested. It is also the only sector for which the Chinese and Indian governments have formally exchanged maps delineating their claims.

Eastern Sector. China claims nearly the entire Indian state of Arunachal Pradesh, which Beijing calls South Tibet. The McMahon Line, which has served as the de facto Line of Actual Control since 1962, was established in 1914 by the British and Tibetan representatives and is not recognized by China. The U.S. recognizes Arunachal Pradesh as sovereign Indian territory.

SOURCE: Heritage Foundation research.

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when Chinese troops settled for three weeks several miles inside northern Indian territory on the Depsang Plains in Ladakh. A visit to India by Chinese President Xi Jinping in September 2014 was overshadowed by another flare-up in border tensions when hundreds of

Chinese PLA forces reportedly set up camps in the mountainous regions of Ladakh, prompting Indian forces to deploy to forward positions in the region. This border standoff lasted three weeks until both sides agreed to pull their troops back to previous positions.

In 2017, Chinese military engineers were building a road to the Doklam plateau, an area claimed by both Bhutan and China, and this led to a confrontation between Chinese and Indian forces, the latter requested by Bhutanese authorities to provide assistance. The crisis lasted 73 days; both sides pledged to pull back, but Chinese construction efforts in the area have continued.⁶³ Improved Chinese infrastructure not only would give Beijing the diplomatic advantage over Bhutan, but also could make the Sili-guri corridor that links the eastern Indian states with the rest of the country more vulnerable.

In June 2020, the situation escalated even further. Clashes between Indian and Chinese troops using rocks, clubs, and fists led to at least 20 Indian dead and (as the Chinese authorities recently admitted) at least four Chinese killed. This was in the Galwan Valley area of Ladakh.⁶⁴ In September, there were reports of shots exchanged near the Pangong Lake region, signaling further potential escalation.⁶⁵

India claims that China occupies more than 14,000 square miles of Indian territory in the Aksai Chin along its northern border in Kashmir, and China lays claim to more than 34,000 square miles of India’s northeastern state of Arunachal Pradesh. The issue is also closely related to China’s concern for its control of Tibet and the presence in India of the Tibetan government in exile and Tibet’s spiritual leader, the Dalai Lama.

China is building up military infrastructure and expanding a network of road, rail, and air links in its southwestern border areas. To meet these challenges, the Indian government has also committed to expanding infrastructure

development along the disputed border, although China currently holds a decisive military edge.

Conclusion

China presents the United States with the region’s most comprehensive security challenge. It poses various threat contingencies across all three areas of vital American national interests: homeland; regional war, including potential attacks on overseas U.S. bases as well as against allies and friends; and international common spaces. China’s provocative behavior is well documented. It is challenging the U.S. and its allies such as Japan at sea, in the air, and in cyberspace; it has raised concerns on its border with India; and it is a standing threat to Taiwan. Despite a lack of official transparency, publicly available sources shed considerable light on China’s rapidly growing military capabilities.

The Chinese commissioned their first homegrown aircraft carrier two years ago and are fielding large numbers of new platforms for their land, sea, air, and outer space forces as well as in the electromagnetic domain. The PLA has been staging larger and more comprehensive exercises, including major exercises in the East China Sea near Taiwan, that are improving the ability of the Chinese to operate their abundance of new systems. It has also continued to conduct probes of both the South Korean and Japanese ADIZs, drawing rebukes from both Seoul and Tokyo.

This *Index* assesses the overall threat from China, considering the range of contingencies, as “aggressive” for level of provocation of behavior and “formidable” for level of capability.

Threats: China

	HOSTILE	AGGRESSIVE	TESTING	ASSERTIVE	BENIGN
Behavior		✓			
	FORMIDABLE	GATHERING	CAPABLE	ASPIRATIONAL	MARGINAL
Capability	✓				

Endnotes

1. *National Security Strategy of the United States of America*, The White House, December 2017, p. 2, <https://www.whitehouse.gov/wp-content/uploads/2017/12/NSS-Final-12-18-2017-0905.pdf> (accessed June 2, 2021).
2. Anastasia Lloyd-Damjanovic, “Beijing’s Deadly Game: Consequences of Excluding Taiwan from the World Health Organization During the COVID-19 Pandemic,” U.S.–China Economic and Security Review Commission *Issue Brief*, May 12, 2020, p. 2, https://www.uscc.gov/sites/default/files/2020-05/Beijings_Deadly_Game_Excluding_Taiwan_from_WHO_during_COVID-19_Pandemic.pdf (accessed June 2, 2021).
3. Joel Wuthnow and Phillip C. Saunders, *Chinese Military Reform in the Age of Xi Jinping: Drivers, Challenges, and Implications*, National Defense University, Institute for National Strategic Studies, Center for the Study of Chinese Military Affairs, *China Strategic Perspectives* No. 10, March 2017, *passim*, <https://ndupress.ndu.edu/Portals/68/Documents/stratperspective/china/ChinaPerspectives-10.pdf> (accessed June 2, 2021).
4. U.S. Department of Defense, Defense Intelligence Agency, *China Military Power: Modernizing a Force to Fight and Win*, 2019, pp. 58–60, https://www.dia.mil/Portals/27/Documents/News/Military%20Power%20Publications/China_Military_Power_FINAL_5MB_20190103.pdf (accessed June 2, 2021).
5. Ronald O’Rourke, “China Naval Modernization: Implications for U.S. Navy Capabilities—Background and Issues for Congress,” Congressional Research Service *Report for Members and Committees of Congress* No. RL33153, updated March 9, 2021, p. 2, <https://fas.org/sgp/crs/row/RL33153.pdf> (accessed June 2, 2021). See also Table 2, “Numbers of Chinese and U.S. Navy Battle Force Ships, 2000–2030,” in *ibid.*, p. 32.
6. Dennis Gormley, Andrew S. Erickson, and Jingdong Yuan, “A Potent Vector: Assessing Chinese Cruise Missile Developments,” *Joint Force Quarterly* No. 75 (4th Quarter 2014), pp. 98–105, https://ndupress.ndu.edu/Portals/68/Documents/jfq/jfq-75/jfq-75_98-105_Gormley-et-al.pdf (accessed June 2, 2021).
7. U.S. Department of Defense, Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People’s Republic of China 2017*, p. 24, https://dod.defense.gov/Portals/1/Documents/pubs/2017_China_Military_Power_Report.PDF (accessed June 2, 2021).
8. U.S. Department of Defense, Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People’s Republic of China 2019*, p. 35, https://media.defense.gov/2019/May/02/2002127082/-1/-1/1/2019_CHINA_MILITARY_POWER_REPORT.pdf (accessed June 2, 2021).
9. U.S. Department of Defense, Defense Intelligence Agency, *China Military Power: Modernizing a Force to Fight and Win*, p. 70.
10. Section II, “National Defense Policy,” in People’s Republic of China, Ministry of National Defense, *White Paper 2010*, http://eng.mod.gov.cn/publications/2017-04/11/content_4778206_2.htm (accessed June 3, 2021).
11. Kristin Huang, “Shandong Aircraft Carrier Group Concludes South China Sea Exercise,” *South China Morning Post*, May 2, 2021, <https://www.scmp.com/news/china/military/article/3131977/shandong-aircraft-carrier-group-concludes-south-china-sea> (accessed June 3, 2021).
12. Franz-Stefan Gady, “China’s New Aircraft Carrier to Use Advanced Jet Launch System,” *The Diplomat*, November 6, 2017, <https://thediplomat.com/2017/11/chinas-new-aircraft-carrier-to-use-advanced-jet-launch-system/> (accessed June 3, 2021).
13. International Institute for Strategic Studies, *The Military Balance 2021: The Annual Assessment of Global Military Capabilities and Defence Economics* (London: Routledge, 2021), p. 255.
14. U.S. Department of Defense, Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People’s Republic of China 2020*, p. 144, <https://media.defense.gov/2020/Sep/01/2002488689/-1/-1/1/2020-DOD-CHINA-MILITARY-POWER-REPORT-FINAL.PDF> (accessed June 3, 2021).
15. U.S. Department of Defense, Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People’s Republic of China 2019*, p. 58.
16. U.S. Department of Defense, Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People’s Republic of China 2018*, p. 34, <https://media.defense.gov/2018/Aug/16/2001955282/-1/-1/1/2018-CHINA-MILITARY-POWER-REPORT.PDF> (accessed June 3, 2021).
17. Franz-Stefan Gady, “Russia Delivers 1st S-400 Missile Defense Regiment to China,” *The Diplomat*, April 3, 2018, <https://thediplomat.com/2018/04/russia-delivers-1st-s-400-missile-defense-regiment-to-china/> (accessed June 3, 2021).
18. U.S. Department of Defense, Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People’s Republic of China 2019*, p. 66.

19. Andrew S. Erickson and Michael S. Chase, "China's SSBN Forces: Transitioning to the Next Generation," Jamestown Foundation *China Brief*, Vol. 9, Issue 12 (June 12, 2009), [http://www.jamestown.org/single/?no_cache=1&tx_ttnews\[tt_news\]=35120#U5G00Sjb5NQ](http://www.jamestown.org/single/?no_cache=1&tx_ttnews[tt_news]=35120#U5G00Sjb5NQ) (accessed June 3, 2021).
20. U.S. Department of Defense, Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2019*, p. 45.
21. Brad Lendon, "China Is Building a Sprawling Network of Missile Silos, Imagery Appears to Show," CNN, July 2, 2021, <https://www.cnn.com/2021/07/02/asia/china-missile-silos-intl-hnk-ml/index.html> (accessed September 11, 2021); Matt Korda and Hans Kristensen, "China Is Building a Second Nuclear Missile Silo Field," Federation of American Scientists, Strategic Security Blog, July 26, 2021, <https://fas.org/blogs/security/2021/07/china-is-building-a-second-nuclear-missile-silo-field/> (accessed September 11, 2021); and Shannon Bugos and Julia Masterson, "New Chinese Missile Silo Fields Discovered," *Arms Control Today*, Vol. 51 (September 2021), <https://www.armscontrol.org/act/2021-09/news/new-chinese-missile-silo-fields-discovered> (accessed September 11, 2021).
22. U.S. Department of Defense, Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2019*, p. 66.
23. For more information on China's cruise missile program, see Dennis M. Gormley, Andrew S. Erickson, and Jingdong Yuan, *A Low-Visibility Force Multiplier: Assessing China's Cruise Missile Ambitions* (Washington: National Defense University Press, 2014), <http://ndupress.ndu.edu/Portals/68/Documents/Books/force-multiplier.pdf> (accessed June 3, 2021). Published by the NDU Press for the Center for the Study of Chinese Military Affairs, "established as an integral part of the National Defense University's Institute for National Strategic Studies on March 1, 2000."
24. U.S. Department of Defense, Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2019*, p. 45.
25. Press release, "U.S. Charges Five Chinese Military Hackers for Cyber Espionage Against U.S. Corporations and a Labor Organization for Commercial Advantage," U.S. Department of Justice, May 19, 2014, <https://www.justice.gov/opa/pr/us-charges-five-chinese-military-hackers-cyber-espionage-against-us-corporations-and-labor> (accessed June 3, 2021).
26. BBC News, "Equifax: US Charges Four Chinese Military Officers over Huge Hack," February 11, 2020, <https://www.bbc.com/news/world-us-canada-51449778> (accessed June 3, 2021).
27. National Air and Space Intelligence Center, "Competing in Space," December 2018, p. 21, <https://media.defense.gov/2019/Jan/16/2002080386/-1/-1/1/190115-F-NV711-0002.PDF> (accessed June 3, 2021).
28. Gregory B. Poling, "The Conventional Wisdom on China's Island Bases Is Dangerously Wrong," War on the Rocks, January 10, 2020, <https://warontherocks.com/2020/01/the-conventional-wisdom-on-chinas-island-bases-is-dangerously-wrong/> (accessed June 3, 2021), and J. Michael Dahm, "Beyond 'Conventional Wisdom': Evaluating the PLA's South China Sea Bases in Operational Context," War on the Rocks, March 17, 2020, <https://warontherocks.com/2020/03/beyond-conventional-wisdom-evaluating-the-plas-south-china-sea-bases-in-operational-context/> (accessed June 3, 2021).
29. "Building an Active, Layered Defense: Chinese Naval and Air Force Advancement," interview with Andrew S. Erickson, U.S. Naval War College, by Greg Chaffin, National Bureau of Asian Research, September 10, 2012, <https://www.nbr.org/publication/building-an-active-layered-defense-chinese-naval-and-air-force-advancement/> (accessed June 3, 2021).
30. Patrick M. Cronin and Ryan D. Neuhard, "Countering China's Laser Offensive," *The Diplomat*, April 2, 2020, <https://thediplomat.com/2020/04/countering-chinas-laser-offensive/> (accessed June 3, 2021).
31. Xinhua, "China Announces Success in Technology to Refuel Satellites in Orbit," June 30, 2016, http://www.china.org.cn/china/Off_the_Wire/2016-06/30/content_38784419.htm (accessed June 3, 2021).
32. Mei Lianju, *Space Operations Teaching Materials* (Beijing, PRC: Academy of Military Sciences Publishing House, 2013), p. 65.
33. See, for example, Brian Weeden, *Through a Glass, Darkly: Chinese, American, and Russian Anti-Satellite Testing in Space*, Secure World Foundation, March 17, 2014, https://swfound.org/media/167224/through_a_glass_darkly_march2014.pdf (accessed June 3, 2021).
34. Ian Easton, "The Great Game in Space: China's Evolving ASAT Weapons Programs and Their Implications for Future U.S. Strategy," Project 2049 Institute, 2009, pp. 4–5, https://project2049.net/wp-content/uploads/2018/05/china_asat_weapons_the_great_game_in_space.pdf (accessed June 3, 2021).
35. Mei Lianju, *Space Operations Teaching Materials*, p. 69.
36. Peter B. de Selding, "Runaway Zombie Satellite Galaxy 15 Continues to Pose Interference Threat," *SpaceNews*, October 15, 2010, <http://www.space.com/9340-runaway-zombie-satellite-galaxy-15-continues-pose-interference-threat.html> (accessed June 3, 2021).

37. Verizon, *2013 Data Breach Investigations Report*, pp. 21–22, <https://cybersecurity.idaho.gov/wp-content/uploads/sites/87/2019/04/data-breach-investigations-report-2013.pdf> (accessed June 3, 2021). See also Elise Ackerman, “New Verizon Security Report Finds a Growing Number of Attacks by China’s Hacker Army,” *Forbes*, April 23, 2013, <https://www.forbes.com/sites/eliseackerman/2013/04/23/new-verizon-security-report-finds-a-growing-number-of-attacks-by-chinas-hacker-army/#11429f622c49> (accessed June 3, 2021), and Lucian Constantin, “Verizon: One in Five Data Breaches Are the Result of Cyberespionage,” *PC World*, April 23, 2013, <http://www.pcworld.com/article/2036177/one-in-five-data-breaches-are-the-result-of-cyberespionage-verizon-says.html> (accessed June 3, 2021).
38. Mike Lennon, “Unit in China’s PLA Behind Massive Cyber Espionage Units,” *SecurityWeek*, February 18, 2013, <https://www.securityweek.com/cyber-unit-chinas-pla-behind-massive-cyber-espionage-operation-report> (accessed June 3, 2021). For the full report, see Mandiant, *APT1: Exposing One of China’s Cyber Espionage Units*, <https://www.fireeye.com/content/dam/fireeye-www/services/pdfs/mandiant-apt1-report.pdf> (accessed June 3, 2021).
39. Bai Bangxi and Jiang Lijun, “‘Systems Combat’ Is Not the Same as ‘System Combat,’” *China National Defense Newspaper*, January 10, 2008, cited in Dean Cheng, “U.S.–China Competition in Space,” testimony before the Subcommittee on Space, Committee on Science, Space, and Technology, U.S. House of Representatives, September 27, 2016, p. 2, <https://docs.house.gov/meetings/SY/SY16/20160927/105387/HHRG-114-SY16-Wstate-ChengD-20160927.pdf> (accessed June 3, 2021).
40. Guo Ruobing, *Theory of Military Information Security* (Beijing, PRC: National Defense University Publishing House, 2013), pp. 12–21.
41. Tan Rukan, *Building Operational Strength Course Materials* (Beijing, PRC: Academy of Military Sciences Publishing House, 2012), p. 204.
42. Reuters, “Taiwan Reports Largest Ever Incursion by Chinese Air Force,” March 26, 2021, <https://www.reuters.com/article/us-taiwana-china-security/taiwan-reports-largest-ever-incursion-by-chinese-air-force-idUSKBN2BI24D> (accessed June 3, 2021).
43. Reuters, “Taiwan Air Force Scrambles Again to Warn off Chinese Jets,” *Al Jazeera*, March 16, 2020, <https://www.aljazeera.com/news/2020/03/taiwan-airforce-scrambles-warn-chinese-jets-200317003712908.html> (accessed June 3, 2021).
44. Alastair Gale, “U.S. Concerns About China Put Focus on Taiwan’s Defensive Weakness,” *The Wall Street Journal*, April 22, 2021, https://www.wsj.com/articles/u-s-concerns-about-taiwan-put-focus-on-islands-defensive-weakness-11619113253?mod=searchresults_pos2&page=1 (accessed June 3, 2021), and Matthew Strong, “Chinese Reconnaissance Plane Enters Taiwan’s ADIZ,” *Taiwan News*, January 2, 2021, <https://www.taiwannews.com.tw/en/news/4092562> (accessed June 3, 2021).
45. Kristin Huang, “Chinese Air Force’s Drill ‘Aimed at Signalling Deterrent Around Taiwan,’” *South China Morning Post*, April 2, 2020, <https://www.scmp.com/news/china/military/article/3077997/chinese-air-forces-drill-aimed-signalling-deterrent-around> (accessed June 3, 2021).
46. Erin Hale, “In Shadow of Coronavirus, China Steps up Manoeuvres Near Taiwan,” *Al Jazeera*, April 23, 2020, <https://www.aljazeera.com/news/2020/04/shadow-coronavirus-china-steps-manoeuvres-taiwan-200422011542456.html> (accessed June 3, 2021), and Yew Lun Tian and Ben Blanchard, “China Rattles Sabres as World Battles Coronavirus Pandemic,” *Reuters*, April 21, 2020, <https://www.reuters.com/article/us-china-security/china-rattles-sabres-as-world-battles-coronavirus-pandemic-idUSKBN2230GC> (accessed June 3, 2021).
47. See Chapter 10, “The South China Sea Tribunal,” in Tufts University, The Fletcher School, *Law of the Sea: A Policy Primer*, <https://sites.tufts.edu/lawofthesea/chapter-ten/> (accessed June 3, 2021).
48. “Japan Lodges Protests Against Chinese Maritime Intrusions Near Senkakus,” *The Japan Times*, April 22, 2020, <https://www.japantimes.co.jp/news/2020/04/22/national/japan-protest-chinese-intrusions-senkakus/> (accessed June 3, 2021).
49. Ankit Panda, “Japan Identifies Chinese Submarine in East China Sea: A Type 093 SSN,” *The Diplomat*, January 16, 2018, <https://thediplomat.com/2018/01/japan-identifies-chinese-submarine-in-east-china-sea-a-type-093-ssn/> (accessed June 3, 2021); Howard Wang, “China vs. Japan: Is the East China Sea Showdown Back on?” *The National Interest*, The Buzz Blog, June 7, 2019, <https://nationalinterest.org/blog/buzz/china-vs-japan-east-china-sea-showdown-back-61492> (accessed June 3, 2021); and Ankit Panda, “China Patrol Ships Sustain Presence Near Senkaku Islands: Report,” *The Diplomat*, June 10, 2019, <https://thediplomat.com/2019/06/china-patrol-ships-sustain-presence-near-senkaku-islands-report/> (accessed June 3, 2021).
50. Jason Le Miere, “China Claims U.S. Military Plane ‘Illegally’ Entered Chinese Air Defense Zone,” *Newsweek*, March 24, 2017, <http://www.newsweek.com/china-claims-us-military-plane-illegally-entered-chinese-air-defense-zone-573711> (accessed June 3, 2021).
51. Hans Nichols and Courtney Kube, “Two Chinese Fighter Jets Intercept U.S. Plane over East China Sea, Officials Say,” *NBC News*, updated May 18, 2017, <http://www.nbcnews.com/news/us-news/two-chinese-fighter-jets-intercept-u-s-plane-officials-say-n761931> (accessed June 3, 2021).

52. Khanh Vu, "Vietnam Protests Beijing's Sinking of South China Sea Boat," Reuters, April 4, 2020, <https://www.reuters.com/article/us-vietnam-china-southchinasea/vietnam-protests-beijings-sinking-of-south-china-sea-boat-idUSKBN21M072> (accessed June 3, 2021), and "Chinese Vessel Rams Vietnamese Fishing Boat in S. China Sea," *The Maritime Executive*, June 14, 2020, <https://www.maritime-executive.com/article/report-chinese-vessel-rams-vietnamese-fishing-boat-in-s-china-sea> (accessed June 3, 2021).
53. Reuters, "Vietnam Protests Beijing's Expansion in Disputed South China Sea," April 19, 2020, <https://www.reuters.com/article/us-vietnam-china-southchinasea/vietnam-protests-beijings-expansion-in-disputed-south-china-sea-idUSKBN2210M7> (accessed June 3, 2021).
54. Tam Anh, "Vietnam Rejects China's Illegal Fishing Ban," *Vn Express International*, April 29, 2021, <https://e.vnexpress.net/news/news/vietnam-rejects-china-s-illegal-fishing-ban-4270611.html> (accessed June 3, 2021).
55. Andreo Calozzo, "Philippines Slams China's 'Dangerous' Move in Disputed Sea," Bloomberg, updated May 3, 2021, <https://www.bloomberg.com/news/articles/2021-05-03/philippines-dials-up-protest-on-china-s-dangerous-sea-maneuver?sref=InMWfBxD> (accessed June 3, 2021).
56. Center for Strategic and International Studies, Asia Transparency Initiative, "Caught on Camera: Two Dozen Militia Boats at Whitsun Reef Identified," April 21, 2021, <https://amti.csis.org/caught-on-camera-two-dozen-militia-boats-at-whitsun-reef-identified/> (accessed June 3, 2021).
57. "Philippines Has Ulterior Motives to Suddenly Hype up the Matter over Niu'e Jiao," *Global Times*, April 5, 2021, <https://www.globaltimes.cn/page/202104/1220284.shtml> (accessed June 3, 2021).
58. Although it has long been a matter of U.S. policy that Philippine territorial claims in the South China Sea lie outside the scope of American treaty commitments, the treaty does apply in the event of an attack on Philippine "armed forces, public vessels or aircraft in the Pacific." Mutual Defense Treaty Between the United States and the Republic of the Philippines, August 30, 1951, Article V, http://avalon.law.yale.edu/20th_century/phil001.asp (accessed June 3, 2021). In any event, Article IV of the treaty obligates the U.S. in case of such an attack to "meet the common dangers in accordance with its constitutional processes." Regardless of formal treaty obligations, however, enduring U.S. interests in the region and perceptions of U.S. effectiveness and reliability as a check on growing Chinese ambitions would likely spur the U.S. to become involved.
59. Admiral Harry B. Harris, Jr., U.S. Navy, Commander, U.S. Pacific Command, statement "On U.S. Pacific Command Posture" before the Committee on Armed Services, U.S. Senate, April 27, 2017, p. 8, https://www.armed-services.senate.gov/imo/media/doc/Harris_04-27-17.pdf (accessed June 26, 2019).
60. Center for Strategic and International Studies, Asia Maritime Transparency Initiative, "An Accounting of China's Deployments to the Spratly Islands," May 9, 2018, <https://amti.csis.org/accounting-chinas-deployments-spratly-islands/> (accessed June 3, 2021).
61. U.S. Department of Defense, *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2019*, p. 75.
62. Kelvin Chen, "China to Set up ADIZ in South China Sea," *Taiwan News*, May 5, 2020, <https://www.taiwannews.com.tw/en/news/3928503> (accessed June 3, 2021).
63. Joel Wuthnow, Satu Limaye, and Nilanthi Samaranyake, "Doklam, One Year Later: China's Long Game in the Himalayas," *War on the Rocks*, June 7, 2018, <https://warontherocks.com/2018/06/doklam-one-year-later-chinas-long-game-in-the-himalayas/> (accessed June 3, 2021).
64. BBC News, "Ladakh: China Reveals Soldier Deaths in India Border Clash," February 19, 2021, <https://www.bbc.com/news/world-asia-56121781> (accessed June 3, 2021).
65. Jeffrey Gettleman, "Shots Fired Along India-China Border for First Time in Years," *The New York Times*, updated September 29, 2020, <https://www.nytimes.com/2020/09/08/world/asia/india-china-border.html> (accessed June 3, 2021).

Russia

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Russia remains a formidable threat to the United States and its interests in Europe. From the Arctic to the Baltics, Ukraine, and the South Caucasus, and increasingly in the Mediterranean, Russia continues to foment instability in Europe. Despite 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 without let-up. In Europe, Russia uses its energy position, along with espionage, cyberattacks, and information warfare, to exploit vulnerabilities with the goal of dividing the transatlantic alliance and undermining 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 the Balkans, Georgia, Syria, and Ukraine, continues both to encourage destabilization and to threaten U.S. interests.

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

- Among the key weapons in Russia's inventory are 336 intercontinental ballistic missiles, 2,840 main battle tanks, 5,220 armored infantry fighting vehicles, more than 6,100 armored personnel carriers, and more than 4,684 pieces of artillery.
- The navy has one aircraft carrier; 49 submarines (including 11 ballistic missile submarines); four cruisers; 11 destroyers; 15 frigates; and 125 patrol and coastal combatants.
- The air force has 1,160 combat-capable aircraft.
- The army has 280,000 soldiers.
- There is a total reserve force of 2,000,000 for all armed forces.¹

In addition, Russian deep-sea research vessels include converted ballistic missile submarines, which hold smaller auxiliary submarines that can operate on the ocean floor.²

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

In February 2018, for example, at Deir al-Zour in eastern Syria, 500 pro-Assad forces and Russian mercenaries armed with Russian tanks, artillery, and mortars attacked U.S.-supported Kurdish forces.⁴ Approximately 30 U.S. Rangers and Delta Force special operators were also at the base.⁵ U.S. air strikes helped to repulse the attack, and “three sources familiar

with the matter” estimated that approximately 300 Russian mercenaries were either killed or wounded.⁶ Moscow claims, however, that since the launch of its Syria operation, only 112 Russian troops have suffered casualties.⁷

In January 2019, reports surfaced that 400 Russian mercenaries from the Wagner Group were in Venezuela to bolster the regime of Nicolás Maduro.⁸ Russian propaganda in Venezuela has supported the regime and stoked fears of American imperialism. In February 2020, Russian Foreign Minister Sergei Lavrov visited Venezuela to “counteract U.S. sanctions” and show support for Maduro.⁹

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 bolster Maduro’s security forces.¹⁰ In December 2018, for example, Russia temporarily deployed two Tu-160 nuclear-capable bombers to Caracas.¹¹ 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.¹²

In July 2016, Russian President Vladimir Putin signed a law creating a National Guard with a total strength (both civilian and military) of 340,000, controlled directly by him.¹³ He created his National Guard, 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.”¹⁴ Putin is more likely to use this force domestically to stifle dissent than he is to deploy it abroad.¹⁵ However, 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.”¹⁶ This deal likely directly resulted from the Belarusian protests that broke out in August 2020 following the fraudulent presidential election.

At first, the COVID-19 pandemic severely affected Russia’s economic growth.¹⁷ However,

the Russian economy rebounded during the latter part of the pandemic and is expected to record growth in 2021.¹⁸ Because of the economic boost following the coronavirus lockdowns, Russia will likely find it easier to fund its military operations.

In 2020, Russia spent \$61.7 billion on its military—5.23 percent less than it spent in 2019—but still remained one of the world’s top five nations in terms of defense spending.¹⁹

Much of Russia’s military expenditure is directed toward modernization of its armed forces. According to a July 2020 Congressional Research Service report, “Russia has undertaken extensive efforts to modernize and upgrade its armed forces” since its invasion of Georgia in 2008.²⁰ 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.²¹ Taking into account total military expenditure, Russia spent more than 4 percent of GDP on defense in 2020.²²

In early 2018, Russia introduced its new State Armament Program 2018–2027, a \$306 billion investment in new equipment and force modernization. However, according to the Royal Institute of International Affairs, “as inflation has eroded the value of the rouble since 2011, the new programme is less ambitious than its predecessor in real terms.”²³

Russia has prioritized modernization of its nuclear capabilities and “claims to be 81 percent of the way through a modernization program to replace all Soviet-era missiles with newer types by the early 2020s on a less-than one-for-one basis.”²⁴ Russia plans to deploy the RS-28 (Satan 2) ICBM by 2022 as a replacement for the RS-36, which is being phased out in the 2020s.²⁵ The missile, which can carry up to 15 warheads,²⁶ was to undergo test launches in 2019, but the tests were delayed. To complete the tests, “Russia will first need to upgrade the testing site,” which Russian Minister of Defense Sergei Shoigu admitted in December 2020 had yet to be built.²⁷

The armed forces also continue to undergo process modernization, which was begun by

Defense Minister Anatoly Serdyukov in 2008.²⁸ Partially because of this modernization, former U.S. Deputy Assistant Secretary of Defense for Strategy and Force Development Elbridge Colby stated in January 2018 that the U.S. military advantage over Russia is eroding.²⁹

In April 2020, the Kremlin stated that it had begun state trials for its T-14 Armata main battle tank in Syria.³⁰ In March 2021, Russian Defense Minister Sergei Shoigu revealed that the Russian military would receive a pilot batch of the T-14 Armata tanks in 2022.³¹ 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 2020.³²

Russia's fifth-generation Su-27 fighter fell 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.³³ Russia lost one of its Su-27 jets near the Crimean coast during a planned mission in March 2020.³⁴

In October 2018, Russia's sole aircraft carrier, the *Admiral Kuznetsov*, was severely damaged when a dry dock sank and a crane fell, puncturing the deck and hull.³⁵ In December 2019, the carrier caught on fire during repair work.³⁶ Despite these setbacks, the *Kuznetsov* is scheduled to begin sea trials in 2022.³⁷ 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.³⁸

Following years of delays, the *Admiral Gorshkov* stealth guided missile frigate was commissioned in July 2018. The second *Admiral Gorshkov*-class frigate, the *Admiral Kasatonov*, began sea trials in April 2019, but according to some analysts, tight budgets and the inability to procure parts from Ukrainian industry (importantly, gas turbine engines) make it difficult for Russia to build the two additional *Admiral Gorshkov*-class frigates as planned.³⁹ Nevertheless, on April 23, 2019, keel-laying

ceremonies took place for the fifth and sixth *Admiral Gorshkov*-class frigates, which reportedly will join Russia's Black Sea fleet.⁴⁰

Russia plans to procure eight *Lider*-class guided missile destroyers for its Northern and Pacific Fleets, but procurement has faced consistent delay.⁴¹ As of April 2020, Russia's Severnoye Design Bureau halted development of the frigates because of financial setbacks.⁴²

In November 2018, Russia sold three *Admiral Grigorovich*-class frigates to India. It is set to deliver at least two of the frigates to India by 2024.⁴³ The ships had been intended for the Black Sea Fleet, but Russia found itself unable to produce a replacement engine following Ukraine sanctions. Of the planned 14 frigates, Russia had engines for only two,⁴⁴ but in January 2021, India procured gas turbine engines from Ukraine to give to Russia to install on the frigates.⁴⁵

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, an addition to the three original Project 955 Boreis.⁴⁶ Russia reportedly will construct at least 10 more Borei-A-class submarines.⁴⁷ According to Admiral Phil Davidson, head of U.S. Indo-Pacific Command, it was expected that "the Russian Pacific Fleet [would] add its first Kalibr cruise missile-capable ships and submarines to its inventory in 2021."⁴⁸ In August 2021, the missile corvette *Sovetsk*, part of Russia's Baltic Fleet, test-launched a Kalibr cruise missile from the White Sea.⁴⁹

The *Khaski*-class submarines 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 6.⁵⁰ According to a Russian vice admiral, these submarines will be two times quieter than current subs.⁵¹

Russia also continues to upgrade its diesel electric *Kilo*-class subs.⁵² Reportedly, it inducted the first improved Project 636 *Kilo*-class submarine into its Pacific Fleet in November 2019 and is now focused on delivering six Project

636 improved *Kilo*-class subs to the Pacific Fleet.⁵³ According to one assessment, the submarines' improvement in 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."⁵⁴

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.⁵⁵

In 2017, Russia reportedly needed to purchase civilian cargo vessels and use icebreakers to transport troops and equipment to Syria at the beginning of major operations in support of the Assad regime.⁵⁶

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 is able to detect targets at up to 1,200 miles, with its missile range maxing at approximately 250 miles, "as part of its wider air-defense modernization." According to one report, the S-500 system will enter full service by 2025.⁵⁷

Russia's counterspace and countersatellite capabilities are formidable. A Defense Intelligence Agency report released in February 2019 summarized Russian capabilities:

[O]ver the last two decades, Moscow has been developing a suite of counterspace weapons capabilities, including

EW [electronic warfare] to deny, degrade, and disrupt communications and navigation and DEW [directed energy weapons] to deny the use of space-based imagery. Russia is probably also building a ground-based missile capable of destroying satellites in orbit.⁵⁸

In December 2020, Russia tested a ballistic, anti-satellite missile built to target imagery and communications satellites in low Earth orbit.⁵⁹ According to Colonel Andrei Revonok, Chief of the Space Troops' Main Center for Missile Attack Warning within Russia's Aerospace Force, in February 2021, the latest *Voronezh* radars will replace all of the existing airspace control systems.⁶⁰

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. According to Air Force General Tod D. Wolters, Commander, U.S. European Command (EUCOM):

Russia employs a *below-the-threshold of armed conflict* strategy via proxies and intermediary forces in an attempt to weaken, divide, and intimidate our Allies and partners using a range of covert, difficult-to-attribute, and malign actions. These actions include information and cyber operations, election meddling, political subversion, economic intimidation, military sales, exercises, and the calculated use of force.⁶¹

Exercises in the Baltic Sea in April 2018, a day after the leaders of the three Baltic nations met with President Donald Trump in Washington, were meant as a message. Russia stated twice in April that it planned to conduct three days of live-fire exercises in Latvia's Exclusive Economic Zone, forcing a rerouting of commercial aviation as Latvia closed some of its airspace.⁶² Sweden issued warnings to commercial aviation and sea traffic.⁶³ It turned

out that Russia did not actually fire any live missiles, and the Latvian Ministry of Defense described the event as “a show of force, nothing else.”⁶⁴ The exercises took place near the Karlskrona Naval Base, the Swedish navy’s largest base.⁶⁵

Russia’s snap exercises are conducted with little or no warning and often involve thousands of troops and pieces of equipment.⁶⁶ 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.⁶⁷ The reintroduction of snap exercises has “significantly improved the Russian Armed Forces’ warfighting and power-projection capabilities,” according to one account. “These, in turn, support and enable Russia’s strategic destabilisation campaign against the West, with military force always casting a shadow of intimidation over Russia’s sub-kinetic aggression.”⁶⁸

Snap exercises have been used for military campaigns as well. According to General Curtis M. Scaparrotti, former EUCOM Commander and NATO Supreme Allied Commander Europe, for example, “the annexation of Crimea took place in connection with a snap exercise by Russia.”⁶⁹ Such exercises also provide Russian leadership with a hedge against unpreparedness or corruption. “In addition to affording combat-training benefits,” the IISS reports, “snap inspections appear to be of increasing importance as a measure against corruption or deception.”⁷⁰

Russia conducted its VOSTOK (“East”) strategic exercises, held primarily in the Eastern Military District, mainly in August and September of 2018 and purportedly with 300,000 troops, 1,000 aircraft, and 900 tanks taking part.⁷¹ Russia’s defense minister claimed that the exercises were the largest to have taken place in Russia since 1981; however, some analysis suggests that the actual number of participating combat troops was in the range of 75,000–100,000.⁷² One analyst described the extent of the exercise:

[T]he breadth of the exercise was impressive. It uniquely involved several major military districts, as troops from the Central Military District and the Northern Fleet confronted the Eastern Military District and the Pacific Fleet. After establishing communication links and organizing forces, live firing between September 13–17 [*sic*] included air strikes, air defence operations, ground manoeuvres and raids, sea assault and landings, coastal defence, and electronic warfare.⁷³

Chinese and Mongolian forces also took part, with China sending 3,200 soldiers from the People’s Liberation Army along with numerous pieces of equipment.⁷⁴ Chinese participation was a significant change from past iterations of VOSTOK, although Chinese forces were likely restricted largely to the Tsugol training ground, and an uninvited Chinese intelligence ship shadowed the Russian Navy’s sea exercises.⁷⁵

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 is no indication that Russia plans to use its capabilities against the United States absent a broader conflict involving America’s NATO allies, the plausible potential for such a scenario serves to sustain the strategic importance of those capabilities.

Russia’s 2021 National Security Strategy describes NATO as a threat to the national security of the Russian Federation:

Military dangers and military threats to the Russian Federation are intensified by attempts to exert military pressure on Russia, its allies and partners, the buildup of the military infrastructure of the North Atlantic Treaty Organization near Russian borders, the intensification of reconnaissance activities, the development of the use of large military formations and

nuclear weapons against the Russian Federation.⁷⁶

The same document also clearly states that Russia will use every means at its disposal to achieve its strategic goals:

[P]articular attention is paid to...improving the system of military planning in the Russian Federation, developing and implementing interrelated political, military, military-technical, diplomatic, economic, information and other measures aimed at preventing the use of military force against Russia and protecting its sovereignty and territorial integrity.⁷⁷

Strategic Nuclear Threat. Russia possesses the largest arsenal of nuclear weapons (including short-range nuclear weapons) among the nuclear powers. 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 the nuclear triad will remain a top priority under the new state armament program.⁷⁸ An aging nuclear workforce could impede this modernization. “[A]lthough Russia’s strategic-defence enterprises appear to have preserved some of their expertise,” according to the IISS, “problems remain, for example, in transferring the necessary skill sets and experience to the younger generation of engineers.”⁷⁹ Nevertheless, Putin revealed in December 2020 “that modern weapons and equipment now make up 86 percent of Russia’s nuclear triad.”⁸⁰

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 but also concerning the Baltic States.⁸¹ 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 ongoing war against Ukraine that began in 2014.

Under Russian military doctrine, the use of nuclear weapons in conventional local and regional wars is seen as de-escalatory because it would cause an enemy to concede defeat. In May 2017, for example, a Russian parliamentarian threatened that nuclear weapons might be used if the U.S. or NATO were to move to retake Crimea or defend eastern Ukraine.⁸²

General Wolters discussed the risks presented by Russia’s possible use of tactical nuclear weapons in his 2020 EUCOM posture statement:

Russia’s vast non-strategic nuclear weapons stockpile and apparent misperception they could gain advantage in crisis or conflict through its use is concerning. Russia continues to engage in disruptive behavior despite widespread international disapproval and continued economic sanctions, and continues to challenge the rules-based international order and violate its obligations under international agreements. The Kremlin employs coercion and aggressive actions amid growing signs of domestic unrest. These actions suggest Russian leadership may feel compelled to take greater risks to maintain power, counter Western influence, and seize opportunities to demonstrate a perception of great power status.⁸³

Russia has two strategies for nuclear deterrence. The first is based on a threat of massive launch-on-warning and retaliatory strikes to deter a nuclear attack; the second is based on a threat of limited demonstration and “de-escalation” nuclear strikes to deter or terminate a large-scale conventional war.⁸⁴ Russia’s

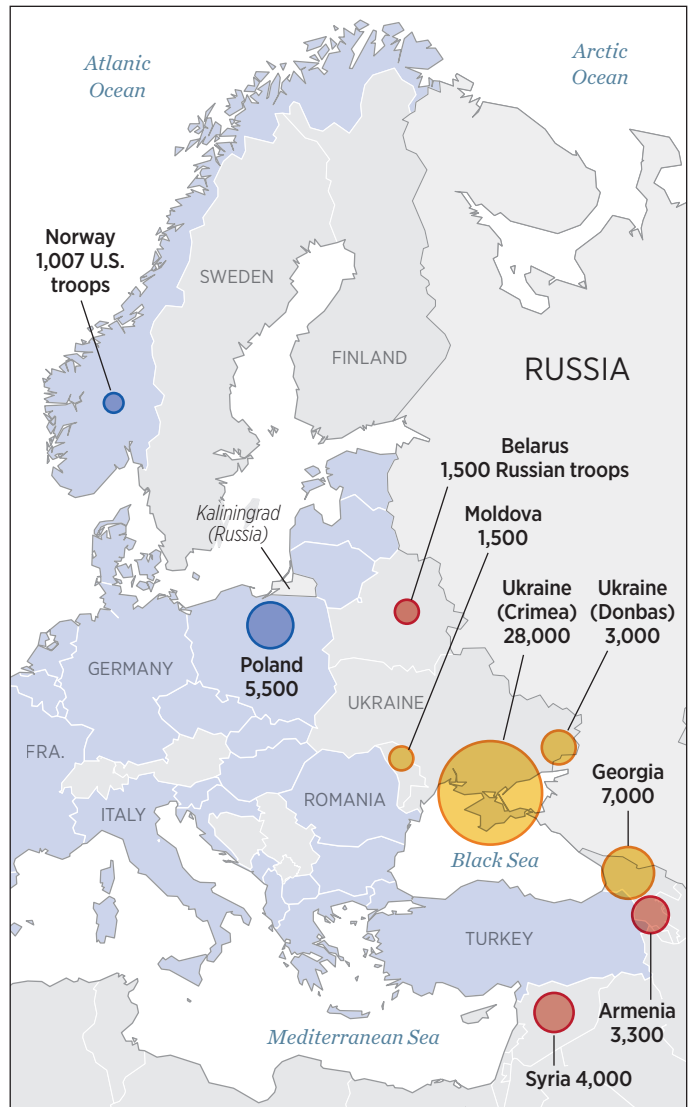
U.S. Troops Vastly Outnumbered by Russian Troops Outside Russia's Borders

U.S. troops in Norway and Poland number less than 7,000—far fewer than the 48,300 Russian troops that are, for all intents and purposes, permanently stationed outside its borders on NATO's perimeter.

- NATO nations
- U.S. troops in NATO nations adjacent to Russia
- Russian troops
- Russian troops in occupied territories

SOURCES: International Institute for Strategic Studies, *The Military Balance 2021: The Annual Assessment of Global Military Capabilities and Defence Economics* (London: Routledge, 2021); U.S. Department of Defense, Defense Manpower Data Center; and Heritage Foundation research.

heritage.org



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.

Moscow has repeatedly threatened U.S. allies in Europe with nuclear deployments and even preemptive nuclear strikes.⁸⁵ 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 revealed that laser-armed Strykers, new Eastern European batteries, and sea-based interceptors are set to arrive by 2023.⁸⁶

Russia continues to violate the Intermediate-Range Nuclear Forces (INF) Treaty, which bans the testing, production, and possession of

intermediate-range missiles.⁸⁷ 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-X-8 cruise missile in violation of the INF Treaty early in 2017 and has deployed battalions with the missile at a missile test site, Kapustin Yar, in southern Russia; at Kamyshlov, near the border with Kazakhstan; in Shuya, east of Moscow; and in Mozdok, in occupied North Ossetia.⁸⁸ U.S. officials consider the banned cruise missiles to be fully operational.⁸⁹

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.⁹⁰ 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 2.⁹¹

The sizable Russian 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 Russia continues to threaten Europe with nuclear attack demonstrates that it will continue to play a central strategic role in shaping both Moscow's military and political thinking and the level of Russia's aggressive behavior beyond its borders.

Threat of Regional War

Many U.S. allies regard Russia as a genuine threat. At times, this threat is of a military nature. At other times, it involves less conventional tactics such as cyberattacks, utilization of energy resources, and propaganda. Today, as in Imperial times, Russia 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:

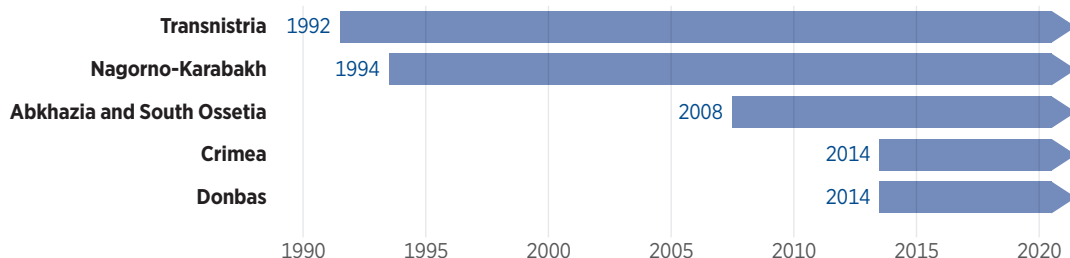
- In May 2016, a Russian spy was sentenced to prison for gathering intelligence for Russia's Foreign Intelligence Service (SVR) while working as a banker in New York. The spy specifically transmitted intelligence on "potential U.S. sanctions against Russian banks and the United States' efforts to develop alternative energy resources."⁹²
- 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.⁹³

The European External Action Service, diplomatic service of the European Union (EU), estimates that 200 Russian spies are operating in Brussels, which also is the headquarters of NATO.⁹⁴ According to one report, Russian spies are becoming harder to track because they infiltrate companies, schools, and even the government.⁹⁵

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.⁹⁶ It took a year and the work of 190 U.K. Army and Air Force personnel plus contractors to complete the physical cleanup of Salisbury.⁹⁷

On March 15, 2018, France, Germany, the U.K., and the U.S. issued a joint statement condemning Russia's use of the nerve agent: "This use of a military-grade nerve agent, of a type developed by Russia, constitutes the first offensive use of a nerve agent in Europe since the Second World War."⁹⁸ U.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.⁹⁹

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 frozen conflict. Since 1994, Armenia had been occupying Azerbaijan's Nagorno-Karabakh region and parts of seven other surrounding districts. The fighting ended in November 2020 when Armenia and Azerbaijan signed a Russian-brokered cease-fire

deal. Although Azerbaijan regained much of its territory, approximately 2,000 Russian peacekeeping troops remain in parts of Nagorno-Karabakh for now.

Abkhazia and South Ossetia.

Since Russia's 2008 invasion of Georgia and the subsequent five-day war, Russian troops have been stationed in both Abkhazia and South Ossetia.

Crimea. In March 2014, Russia illegally annexed the entire Crimean peninsula, and Russian troops have been stationed

there ever since then. In March–April 2021, Russian troops massed within Crimea in connection with an escalation of fighting in the Donbas region.

Donbas. Russia's annexation of Crimea led to an armed conflict between Russian troops, Russian-backed separatist forces, and Ukrainian soldiers in Ukraine's eastern Donbas region. In March–April 2021, the fighting escalated sharply, and Russia massed troops along the Ukrainian border in response to that escalation.

SOURCE: Heritage Foundation research.

heritage.org

Russian intelligence operatives are reportedly mapping U.S. telecommunications infrastructure around the United States, focusing especially on fiber-optic cables.¹⁰⁰

- 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.¹⁰¹
- In December 2016, the U.S. expelled 35 Russian intelligence operatives, closed two compounds in Maryland and New York that were used for espionage, and levied additional economic sanctions against individuals who took part in interfering in the 2016 U.S. election.¹⁰²
- 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.¹⁰³

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.¹⁰⁴ 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.”¹⁰⁵ 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 2017.¹⁰⁶ Russia also has an agreement with Nicaragua, signed in 2015, that allows access to Nicaraguan ports for its naval vessels.¹⁰⁷

Pressure on Central and Eastern Europe. Moscow poses a security challenge to members of NATO that border Russia.

Although a conventional Russian attack against a NATO member is unlikely, primarily because it would trigger a NATO response, it cannot be entirely discounted. 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 subversion, but also a potential military threat.”¹⁰⁸

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 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 annex Crimea.

According to Lithuania’s *National Threat Assessment 2021*, “It is almost certain that Russia’s policy of denying the sovereign choices of its neighbours will remain one of the most significant security threats in the Baltic Region in the future.”¹⁰⁹ Its *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.¹¹⁰

Latvian authorities describe the means used by Russia to claim that it is defending the rights of citizens or Russian compatriots in similar terms: TV propaganda to push discrediting messages about Latvia and stories in which the rights of Russian citizens are allegedly violated; “spreading interpretations of history favourable to Russia within Russia and abroad, as well as actively engaging

in military-memorial work”; and the use of “compatriot support funds and other compatriot policy bodies” targeted at Latvian youth.¹¹¹

Russia has also sought to undermine the statehood and legitimacy of the Baltic States. In January 2018, for example, Putin signed a decree renaming an air force regiment the “Tallinn Regiment” to “preserve holy historical military traditions” and “raise [the] spirit of military obligation.”¹¹² General Scaparrotti testified in March 2017 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.”¹¹³

In 2020, Russia used the COVID-19 pandemic to spread disinformation. In March, for example, various Russian state news sources reported that the U.S. initiated the coronavirus pandemic, that the U.S. deployed the virus as a “biological weapon,” or that the virus was a complete hoax created by the United States. Nor did Russia create this disinformation on its own; it relied on various theories created by China and Iran.¹¹⁴

In addition, Russia has sought to use disinformation to undermine NATO’s Enhanced Forward Presence (eFP) in the Baltics. In April 2017, for example, Russian hackers planted a false story about U.S. troops being poisoned by mustard gas in Latvia on the Baltic News Service website.¹¹⁵ Since 2017, a disinformation campaign nicknamed “ghostwriter” has been ongoing. In some cases, Russian hackers published false news stories “on real news websites without permission.” In one case, a Lithuanian news site published a fake article in 2019 “claiming that German soldiers had desecrated a Jewish cemetery,” and in another, a fake message was published on the Polish War Studies Academy website, purportedly from the organization’s commander, calling for troops “to fight against ‘the American occupation.’”¹¹⁶

U.S. troops stationed in Poland for NATO’s eFP have been the target of similar Russian disinformation campaigns.¹¹⁷ A fabricated interview with U.S. Army Europe commander Lieutenant General Christopher Cavoli that

was published online was meant to undermine NATO’s reputation among the public.¹¹⁸ 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.”¹¹⁹ In particular, more recent Russian propaganda has focused on portraying eFP as an “occupying force.”¹²⁰

Russia has also demonstrated a willingness to use military force to change the borders of modern Europe. When Kremlin-backed Ukrainian President Viktor Yanukovich 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.¹²¹

Russia’s annexation of Crimea has effectively cut Ukraine’s coastline in half, and Russia has claimed rights to underwater resources off the Crimean Peninsula.¹²² In May 2018, Russia inaugurated the first portion of a \$7.5 billion, 11.8-mile bridge connecting Russia with Kerch in occupied Crimea. The project will be fully completed in 2023.¹²³ 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.¹²⁴ In December 2019, Russia completed a new rail bridge over the Kerch Strait that the EU condemned as “yet another step toward a forced integration of the illegally annexed peninsula.”¹²⁵

Russia has deployed 28,000 troops to Crimea and has embarked on a major program to build housing, restore airfields, and install new radars there.¹²⁶ 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.”¹²⁷ 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.¹²⁸

These numbers may be larger now, given Russia’s military buildup in Ukraine in April 2021.¹²⁹ In March 2019, Russia announced the deployment of nuclear-capable Tupolev Tu-22M3 strategic bombers to Gvardeyskoye air base in occupied Crimea.¹³⁰

Control of Crimea has allowed Russia to use the Black Sea as a platform to launch and support naval operations in the Eastern Mediterranean.¹³¹ The Black Sea fleet has received six *Kilo* diesel submarines and three *Admiral Grigorovich*-class frigates equipped with Kalibr-NK long-range cruise missiles.¹³² Russia is also planning to add *Gorshkov*-class frigates to its Black Sea fleet.¹³³ Kalibrs have a range of at least 2,500 kilometers, placing cities from Rome to Vilnius within range of Black Sea-based cruise missiles.¹³⁴

Russia has deployed five S-400 air defense systems with a potential range of around 250 miles to Crimea.¹³⁵ Russia’s new S-350 air defense systems also have the potential to be deployed to Crimea.¹³⁶ In addition, “local capabilities have been strengthened by the Pantsir-S1 (SA-22 Greyhound) short-to-medium-range surface-to-air missile (SAM) and anti-aircraft artillery weapons system, which particularly complements the S-400.”¹³⁷ 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.”¹³⁸

In eastern Ukraine, Russia has helped to foment and sustain a separatist movement. Backed, armed, and trained by Russia, separatist leaders in eastern Ukraine have declared the so-called Lugansk People’s Republic and Donetsk People’s Republic. Moscow has backed separatist factions in the Donbas region of eastern Ukraine with advanced weapons, technical and financial assistance, and Russian conventional and special operations

forces. Approximately 3,000 Russian soldiers are operating in the Donbas region of Ukraine.¹³⁹ Russian-backed separatists daily violate the September 2014 Minsk I and February 2015 Minsk II cease-fire agreements.¹⁴⁰ These agreements have led to the de facto partition of Ukraine and have created a frozen conflict that remains both deadly and advantageous for Russia. As of April 2021, the war in Ukraine had cost an estimated 14,000 lives.¹⁴¹

On November 25, 2018, Russian forces blocked the passage of three Ukrainian naval vessels through the Kerch Strait and opened fire on the ships before boarding and seizing them along with 24 Ukrainian sailors.¹⁴² In September 2019, Russia released the sailors in a prisoner swap with Ukraine.¹⁴³ Russian harassment of ships sailing through the Kerch Strait and impeding of free movement had taken place consistently before the November 2018 aggression and continued afterwards.¹⁴⁴ Russian inspections of ships, blockages of the strait, and delays have coalesced to constrict the port of Mariupol, where shipping traffic has been greatly reduced since 2014.¹⁴⁵

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

Russia stations approximately 1,500 soldiers in Transnistria, a few hundred of which Moldova accepts as peacekeepers. In 2017, the Constitutional Court ruled that Russia’s troop presence in Moldova was unconstitutional, and parliament adopted a declaration calling on Russia to withdraw. 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 political settlement to the Transnistrian conflict appears distant. The Moldovan government supports a special local governance status for Transnistria, but Russia and authorities in Transnistria have resisted agreement.

The conflict-resolution process operates in a “5+2” format under the chairmanship 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 a Border Assistance Mission to Moldova and Ukraine (EUBAM). EUBAM seeks to help the two countries combat transborder crime, facilitate trade, and resolve the conflict over Transnistria, which shares a long border with Ukraine.¹⁴⁶

Russia continues to occupy 12 percent of Moldova’s territory. In August 2018, Russian and separatist forces equipped with armored personnel carriers and armored reconnaissance vehicles exercised crossing the Dniester River in the demilitarized security zone. Moldovan authorities called the exercises “provocative,” and the Organization for Security and Co-operation in Europe (OSCE) Mission to Moldova “expresse[d] its concern.”¹⁴⁷ 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.¹⁴⁸

Russia’s permanent stationing of Iskander missiles in Kaliningrad in 2018 occurred a year to the day after NATO’s eFP deployed to Lithuania.¹⁴⁹ Russia reportedly has deployed tactical nuclear weapons, the S-400 air defense system, and P-800 anti-ship cruise missiles to Kaliningrad.¹⁵⁰ Additionally, it plans to reestablish a tank brigade and a “fighter aviation regiment and naval assault aviation (bomber) regiment” in Kaliningrad and to reequip the artillery brigade with new systems.¹⁵¹ According to the IISS, the majority of Russian air force pilot graduates this past year were sent to Kaliningrad “to improve staffing” in the air force units located there.¹⁵²

Russia also has outfitted a missile brigade in Luga, Russia, a mere 74 miles from the Estonian city of Narva, with Iskander missiles.¹⁵³

Iskanders have been deployed to the Southern Military District at Mozdok near Georgia and Krasnodar near Ukraine as well, and Russian military officials have reportedly asked manufacturers to increase the Iskander missiles’ range and improve their accuracy.¹⁵⁴

Nor is Russia deploying missiles only in Europe. In February 2018, Russia approved the deployment of warplanes to an airport on Iturup, one of the largest Kuril Islands.¹⁵⁵ 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.¹⁵⁶ In December 2020, Russia announced the deployment of S-300V4 air defense missile systems on Iturup.¹⁵⁷ Russia has stationed 3,500 troops on the Kuril Islands. In December 2018, Japan lodged a formal complaint over the building of four new barracks.¹⁵⁸

Russia has deployed additional troops and capabilities near its western borders. In May 2021, Russia announced plans to increase its troop presence along its western border “in response to what it views as an increasing threat from the United States and the NATO alliance.”¹⁵⁹ In June 2020, one report revealed that the brigade in the Western Military District is relatively well-equipped with “modern weapons and specialist equipment, including ‘T-90A tanks, BTR-82A armored personnel carriers, BMP-3 combat vehicles, as well as 9A34 Strela-10 and 2S6M Tunguska air defense systems.’”¹⁶⁰ According to a report published by the Royal Institute of International Affairs:

Five dedicated storage and maintenance bases have been established in the Western Military District, and another one in the Southern Military District (and a further 15 in the Central and Eastern districts). These, similar to the US Army’s POMCUS (Prepositioning Of Materiel Configured in Unit Sets), contain pre-positioned, properly maintained brigade-level assets, and 2.5 units of fire for all equipments.¹⁶¹

Russia represents a real and potentially existential threat to NATO member countries in Eastern and Central Europe. Considering Russia's aggression in Georgia and Ukraine, a conventional attack against a NATO member, while unlikely, cannot be ruled out entirely. In all likelihood, Russia will continue to use nonlinear means in an effort to pressure and undermine both these nations and the NATO alliance.

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 and yet unexploited oil and gas reserves. The majority 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. Additionally, "Russian hardware in the High North area includes bombers and MiG31BM jets, and new radar systems close to the coast of Alaska."¹⁶²

Russia has also 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."¹⁶³ 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."¹⁶⁴

In May 2017, Russia announced that its build-up of the Northern Fleet's nuclear capacity is intended "to phase 'NATO out of [the] Arctic.'"¹⁶⁵ A recent statement exercise occurred in March 2021, when three Russian ballistic missile submarines punched through the Arctic ice near the North Pole.¹⁶⁶

In addition to an ongoing strong naval presence in the Arctic, Russia often undertakes aggressive Arctic flights. In one instance in March 2017, nine Russian bombers simulated an attack on the U.S.-funded, Norwegian-run radar installation at Vardø, Norway, above the Arctic Circle.¹⁶⁷ In May 2017, 12 Russian aircraft simulated an attack against NATO naval forces taking part in the Eastern Atlantic Area (EASTLANT) 17 exercise near Tromsø, Norway, and later that month, Russian aircraft targeted aircraft from 12 nations that were taking part in the Arctic Challenge 2017 exercise near Bodø.¹⁶⁸ In April 2018, Maritime Patrol aircraft from Russia's Pacific Fleet for the first time exercised locating and bombing enemy submarines in the Arctic while fighter jets exercised repelling an air invasion in the Arctic region.¹⁶⁹

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 designed to defend the territorial integrity of its members. Five NATO members (Canada, Denmark, Iceland, Norway, and the United States) are Arctic countries, and each has territory above the Arctic Circle. Two closely allied nations (Finland and Sweden) also have Arctic territory.

The U.S. in recent years has begun to pay increased attention to the Arctic theater in Europe. One way has been 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.¹⁷⁰ Construction at Evenes will support Norwegian and allied maritime patrol aircraft in monitoring 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:

Increased Russian presence, more Russian bases in the High North, has also triggered the need for more NATO presence, and we have increased our presence there with more naval capabilities, presence in the air, and not least, the importance of protecting transatlantic under-sea cables transmitting a lot of data.¹⁷¹

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, additional powers to confiscate land “in areas with special objects for land use, and in the border areas.”¹⁷² 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 2018.¹⁷³

The Russian National Guard, which reports to President Putin,¹⁷⁴ 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 2017.¹⁷⁵ 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 is expected to start production of [LNG] in 2023.”¹⁷⁶

In May 2018, Putin issued a presidential decree setting a target of 80 million tons shipped across the NSR by 2024.¹⁷⁷ In December 2020, Rosatom, Russia's state nuclear power company, announced that it had shipped a record 32 million tons on the NSR in 2020. This surpassed the original target of 29 million tons.¹⁷⁸ In March 2019, Russian media reported that the government was drafting stringent navigation rules for the entire length of the NSR outside Russian territorial waters. Under these rules, for example, foreign navies would be required to “post a request with Russian authorities to pass through the *Sevmorput* [NSR] 45 days in advance, providing detailed technical information about the ship, its crew and destination.”¹⁷⁹

Russia also has been investing in military bases in the Arctic. Its base on Alexandra Land, commissioned in 2017, can house 150 soldiers autonomously for up to 18 months.¹⁸⁰ 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.¹⁸¹ Also in 2018, Russia 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.¹⁸²

Air power in the Arctic is increasingly important to Russia, which has 14 operational airfields in the region along with 16 deep-water ports.¹⁸³ According to a March 18, 2021, *Forbes* report, “the Russian navy has tasked a regiment of upgraded MiG-31BM [interceptor aircraft] to skip and hop across Arctic airfields in order to range across the cold-but-rapidly-thawing North Pole.”¹⁸⁴ 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.”¹⁸⁵

Russia resumed regular fighter jet combat patrols in the Arctic in 2019.¹⁸⁶ 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.¹⁸⁷ Over 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.¹⁸⁸

Russian Arctic flights are often aggressive. In May 2017, 12 Russian aircraft simulated an attack against NATO naval forces taking part in the EASTLANT 17 exercise near Tromsø, Norway, and later that month, Russian aircraft targeted aircraft from 12 nations, including the U.S., that took part in the Arctic Challenge 2017 exercise near Bodø.¹⁸⁹ As noted previously, in April 2018, Maritime Patrol aircraft from Russia’s Pacific Fleet for the first time exercised locating and bombing enemy submarines in the Arctic while fighter jets exercised repelling an air invasion in the Arctic region.¹⁹⁰ In March 2020, two Russian strategic heavy bombers flew over U.S. submarines surfaced in the Arctic Ocean, and in April, two maritime Tu-142 reconnaissance and anti-submarine warfare planes flew over the Barents, Norwegian, and North Seas.¹⁹¹

In 2017, Russia activated a new radar complex on Wrangel Island.¹⁹² 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.¹⁹³ Construction of the cable began in spring 2021.¹⁹⁴

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.¹⁹⁵ 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.”¹⁹⁶

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.¹⁹⁷

For a few years, Russia was developing three new nuclear icebreakers, and in May 2019, it launched its third and final *Arktika*.¹⁹⁸ The *Arktika*, currently the world’s largest and most powerful nuclear icebreaker,¹⁹⁹ sailed straight to the North Pole in October 2020.²⁰⁰

Russia’s most recently released naval doctrine, from July 2017, cites 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.”²⁰¹ In May 2017, Russia had announced that its buildup of the Northern Fleet’s nuclear capacity is intended “to phase ‘NATO out of [the] Arctic.’”²⁰²

Russia’s Northern Fleet is also building newly refitted submarines, including a newly converted *Belgorod* nuclear-powered submarine that was launched in April 2019.²⁰³ The *Belgorod* is expected to carry six Poseidon drones, also known as nuclear torpedoes, and

will carry out “a series of special missions.”²⁰⁴ The submarine will have a smaller minisub that will potentially be capable of tampering with or destroying undersea telecommunications cables.²⁰⁵ 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.”²⁰⁶ A similar submarine, the *Khabarovsk*, is under construction and scheduled to be launched in the fall of 2021.²⁰⁷

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, as quoted in a Congressional Research Service report:

[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.²⁰⁸

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.²⁰⁹ The Georgian Foreign Ministry criticized the treaties as a step toward “annexation of Georgia’s occupied territories,”²¹⁰ 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.²¹¹ In November 2017, the U.S. State Department approved an estimated \$75 million sale of Javelin missiles to Georgia, and in June 2018, the State Department approved a sale of Stinger missiles.²¹² 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”).²¹³ 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.²¹⁴

Today, 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 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 until at least 2044.²¹⁵ The bulk of Russia's forces, consisting of 3,300 soldiers, dozens of fighter planes and attack helicopters, 74 T-72 tanks, almost 200 APCs, and an S-300 air defense system, are based around the 102nd Military Base.²¹⁶ Russia and Armenia have also signed a Combined Regional Air Defense System agreement. Even after the election of Prime Minister Nikol Pashinyan following the so-called Velvet Revolution, Armenia's cozy relationship with Moscow remains unchanged.²¹⁷ Armenian troops have even deployed alongside Russian troops in Syria to the dismay of U.S. policymakers.²¹⁸

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.²¹⁹ 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."²²⁰

The conflict ended on November 9, 2020, when Armenia and Azerbaijan signed a Russian-brokered cease-fire agreement.²²¹ As part of the nine-point cease-fire plan, nearly 2,000 Russian peacekeeping soldiers were deployed to certain parts of Nagorno-Karabakh largely populated by ethnic Armenians. In May 2021, tensions rose again in the region but for

a different reason—the demarcation of the Armenian-Azerbaijani border.²²²

The Nagorno-Karabakh conflict offers another opportunity for Russia to exert malign influence and consolidate power in the region. While its sympathies lie with Armenia, Russia is the largest supplier of weapons to both Armenia and Azerbaijan.²²³ 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."²²⁴

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 likely shares with Putin.²²⁵ Russia's Hmeymim Air Base is closely located to Idlib, a source of 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

Before and After the Second Karabakh War

The Nagorno-Karabakh region has been defined by nearly three decades of conflict. After a second war in the fall of 2020, Armenia and Azerbaijan finally reached a settlement. Azerbaijan regained much of its territory, and Russian peacekeeping forces now oversee the remaining parts.



SOURCE: Heritage Foundation research.

 heritage.org

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."²²⁶ 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.²²⁷ 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."²²⁸

The agreement with Syria also includes upgrades to the Hmeymim air base at Latakia, including repairs to a second runway.²²⁹ Russia deployed the S-400 anti-aircraft missile system to Hmeymim in late 2015.²³⁰ 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."²³¹ 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.²³² In August 2020, Syria agreed to give Russia additional land and coastal waters to expand its Hmeymim air base.²³³

Russia is using Syria as a testing ground for new weapons systems while obtaining valuable combat experience for its troops. 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."²³⁴ The IISS similarly reports that Russia has used Syria as "a test bed for the development of joint operations and new weapons and tactics."²³⁵ 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.²³⁶

Overall, Russian arms sales abroad reportedly exceeded \$13 billion in 2019, surpassing sales in 2018 by more than \$2 billion.²³⁷

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-10.²³⁸ 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."²³⁹

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."²⁴⁰

In October 2018, Egyptian President Abdel Fattah al-Sisi signed a strategic cooperation treaty with Russia.²⁴¹ 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.²⁴² Russia is a major exporter of arms to Egypt, which agreed to purchase 20 Su-35 fighter jets in 2018 for \$2 billion.²⁴³ Production of the Su-35 jets began in May 2020.²⁴⁴

In Libya, Russia continues to support Field Marshal Khalifa Haftar with weapons and military advisers. According to the Department of Defense, Russia's Wagner Group continues to be involved militarily in Libya.²⁴⁵ Despite its ties to Haftar, Russia has also focused on

growing business ties with the Libyan government in Tripoli.²⁴⁶

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 U.S. Navy aircraft over the Mediterranean Sea was intercepted by a Russian Su-35 jet—the second time in four days that “Russian pilots made unsafe maneuvers while intercepting US aircraft.”²⁴⁷ The Russian jet had taken off from Hmeymim air base in Syria. This happened again in May when two Russian Su-35 jets unsafely intercepted a U.S. Navy P-8A maritime patrol aircraft over international waters in the Eastern Mediterranean.²⁴⁸

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. This was one of the first times since the Cold War that the U.S. and NATO allies had tracked a Russian submarine during combat operations.²⁴⁹ In February 2020, General Wolters revealed that Russian submarines are becoming more active and harder for the United States to track.²⁵⁰

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.²⁵¹

Senior members of the Russian government have alleged that NATO enlargement in the Balkans is one of the biggest threats to Russia.²⁵² In June 2017, Montenegro became NATO’s 29th member state, and in March 2020, North Macedonia became NATO’s 30th member state, both joining Albania and Croatia as NATO members in the Balkans.

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, 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 trial judge stated that the convicted Russians who organized the plot “knowingly tried to terrorize Montenegrins, attack others, threaten and hurt basic constitutional and social structures.”²⁵³

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.²⁵⁴

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.²⁵⁵ In 2018, after North Macedonia was invited to join NATO, Russia's ambassador to the EU stated that "there are errors that have consequences."²⁵⁶ 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 opposing the agreement.²⁵⁷

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.²⁵⁸

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."²⁵⁹

In February 2020, Serbia purchased the Pantsir S1 air-defense system from Russia despite objections and potential sanctions from the United States.²⁶⁰ 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.²⁶¹

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.²⁶²

In a January 2019 state visit to Serbia, Vladimir Putin stated a desire for a free trade agreement between Serbia and the Russian-led Eurasian Economic Union, to be signed by the end of the year. An agreement between the two countries was signed in October 2019 "following veiled warnings from the European Union."²⁶³ In addition, Russia 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. Russia also has continued to oppose Kosovo's recognition as an independent sovereign country and has condemned Kosovo's creation of its own army.²⁶⁴

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."²⁶⁵ Like Russia, Serbia is a member of NATO's Partnership for Peace program. Additionally, Serbia has been part of the U.S. National Guard's State Partnership Program, partnering with the State of Ohio 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.²⁶⁶ Recent events in Ukraine, especially the annexation of Crimea, have inspired more separatist rhetoric in Republika Srpska. In September 2018, two weeks before elections in Bosnia and Herzegovina, Russian Foreign Minister Lavrov visited Sarajevo, but he also visited Banja Luka in Republika Srpska, where he visited the site of "a future Serbian-Russian Orthodox cultural center."²⁶⁷

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 semi-autonomous 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.²⁶⁸ In October 2018, just days before elections, Dodik again visited Russia where he watched the Russian Grand Prix in a VIP box with Putin.²⁶⁹ 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 were illegal.²⁷⁰

On January 9, 2020, Bosnian Serbs again held "statehood day."²⁷¹ At the 2018 "statehood day," then-president Dodik and the self-proclaimed leaders of South Ossetia had "signed a memorandum on cooperation between the 'states.'"²⁷² 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."²⁷³ Veterans organizations in Russia and Republika Srpska have developed close ties.²⁷⁴

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."²⁷⁵

Russia 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, in January 2017, a train traveling from Belgrade to Mitrovica, a heavily Serb town in Kosovo, 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."²⁷⁶

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 will someday 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 behavior as “brazen Russian hostility.”²⁷⁷ In April 2018, a fully armed Russian jet buzzed a French frigate operating in the eastern Mediterranean.²⁷⁸

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.”²⁷⁹ Thus, any disruption would cause a catastrophic reduction in the flow of capital.

The *Yantar*, a mother ship to two Russian minisubmersibles, 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.²⁸⁰ The Russian spy ship *Viktor Leonov* was spotted collecting intelligence within 20 miles of Kings Bay in March 2017 and within 30 miles of Groton, Connecticut, in February 2018.²⁸¹

Airspace. Russia has continued its provocative military flights near U.S. and European

airspace over the past year. In April 2021, Lieutenant General David Krumm from Joint Base Elmendorf-Richardson, Alaska, revealed that during the past year, there was a large increase in Russian activity and the U.S. intercepted more than 60 Russian aircraft.²⁸² That was 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.”²⁸³ 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.”²⁸⁴

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 Scotland while the U.S., Australia, and 11 NATO allies were taking part in the Joint Warrior exercise in Scotland.²⁸⁵ Also in March 2019, Italian jets operating from Keflavík in Iceland intercepted two Russian Tu-142 Bear bombers flying in Iceland’s air surveillance area.²⁸⁶

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.²⁸⁷

Russian flights have also targeted U.S. ally Japan. Twice in one day in June 2019, two Russian Tupolev Tu-95 bombers entered Japanese airspace—over Minamidaito Island east of Okinawa and over Hachijo Island southeast of Tokyo. Japan sent out fighter jets to warn them.²⁸⁸ In incidents in January, March, and May 2019, Japan scrambled fighter jets to intercept a Russian Il-38N maritime patrol aircraft (MPA) flying over the Sea of Japan.²⁸⁹ Nor is it only MPAs that fly near Japan; for instance, Russian Su-24 attack aircraft were intercepted in December 2018 and January 2019 incidents.²⁹⁰ 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 was necessary in the preceding year.²⁹¹

The principal threat from Russian airspace incursions, however, remains near NATO territory in Eastern Europe, specifically in the Black Sea and Baltic regions. In the Black Sea region, in December 2020, Russia scrambled one of its Su-30 fighter jets to prevent U.S. and French reconnaissance planes from crossing the Russian border, even though they were flying over international waters.²⁹² 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.”²⁹³ In the Baltics, in April 2021, “NATO scrambled fighter jets from bases in Estonia, Lithuania and Poland to track and intercept Russian fighters, bombers and surveillance aircraft over the Baltic Sea.”²⁹⁴

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.²⁹⁵ 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 2019.²⁹⁶ In August 2019, two Russian Su-27 escort jets flew over the Baltic Sea without a flight plan and without turning on their transponders.²⁹⁷

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.

Cyber. Russian cyber capabilities are sophisticated and active, regularly threatening economic, social, and political targets around the world. Even more, Moscow 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 paralyze all of the enemy state’s power structures.’”²⁹⁸

Russia continues to probe U.S. critical infrastructure. In January 2019, testifying before the Senate Select Committee on Intelligence, then-Director of National Intelligence Daniel R. Coats assessed that:

Russia has the ability to execute cyber attacks in the United States that generate localized, temporary disruptive effects on critical infrastructure—such as disrupting an electrical distribution network for at least a few hours—similar to those demonstrated in Ukraine in 2015 and 2016. Moscow is mapping our critical infrastructure with the long-term goal of being able to cause substantial damage.²⁹⁹

Russia continued to conduct cyberattacks on government and private entities in 2020 and 2021. In December 2020, Russian hackers “broke into a range of key government networks, including in the Treasury and Commerce Departments, and had free access to

their email systems.”³⁰⁰ According to *The New York Times*, “[a]bout 18,000 private and government users downloaded a Russian tainted software update—a Trojan horse of sorts—that gave its hackers a foothold into victims’ systems, according to SolarWinds, the company whose software was compromised.”³⁰¹ Multiple U.S. government agencies, the Pentagon, nuclear labs, and several *Fortune* 500 companies had been using the SolarWinds software on their computers.³⁰²

In April 2021, the U.S. Treasury sanctioned Russia for the SolarWinds hack. It also sanctioned 32 Russian “entities and individuals” who had carried out “Russian government-directed attempts to influence the 2020 U.S. presidential election, and other acts of disinformation and interference.”³⁰³

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.”³⁰⁴ The 5,500-mile pipeline, “responsible for carrying fuel from refineries along the Gulf Coast to New Jersey,” was down for six days.³⁰⁵ Colonial Pipeline paid DarkSide \$90 million in bitcoin as a ransom payment,³⁰⁶ but the Department of Justice was able to recover approximately \$2.3 million of that amount a few weeks later.³⁰⁷ In June 2021, REvil, a Russian cybercriminal group, launched a ransomware attack on JBS, “the world’s largest meat processing company.”³⁰⁸ As a result of the cyberattack, JBS was forced to shut down all nine of its U.S. plants for a brief period.³⁰⁹

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. According to *The New York Times*, the attack “took out websites and interrupted television broadcasts.”³¹⁰ The attack was limited, but through its accusation, the U.S. sought to deter Moscow from intervening in the 2020 presidential election.

In April 2018 alone, Germany’s head of domestic intelligence accused Moscow of attacking his government’s computer networks,

and the U.K.’s National Cyber Security Center warned that Russian hackers were targeting Britain’s critical infrastructure supply chains. Cyber activity continues to be a significant part of Russia’s efforts to manipulate and undermine democratic elections in Europe and elsewhere.

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 when it is desired. 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.”³¹¹

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 their sophistication 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. Behind this threat lies Russia. 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 with respect to America’s allies in the region is different. 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 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 vis-à-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 2021 Worldwide Threat Assessment states:

Moscow will continue to employ a variety of tactics this year meant to undermine US influence, develop new international norms and partnerships, divide Western countries and weaken Western alliances, and demonstrate Russia’s ability to shape global events as a major player in a new multipolar international order. Russia will continue to develop its military, nuclear, space, cyber, and intelligence capabilities, while actively engaging abroad and leveraging its energy resources, to advance its agenda and undermine the United States.³¹²

For these reasons, the *Index of U.S. Military Strength* continues to assess the threat from Russia as “aggressive” and “formidable.”

Threats: Russia

	HOSTILE	AGGRESSIVE	TESTING	ASSERTIVE	BENIGN
Behavior		✓			
	FORMIDABLE	GATHERING	CAPABLE	ASPIRATIONAL	MARGINAL
Capability	✓				

Endnotes

1. International Institute for Strategic Studies, *The Military Balance 2021: The Annual Assessment of Global Military Capabilities and Defence Economics* (London: Routledge, 2021), pp. 164–217.
2. 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 June 19, 2021).
3. 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 June 19, 2021).
4. Kimberly Marten, “The Puzzle of Russian Behavior in Deir al-Zour,” *War on the Rocks*, July 5, 2018, <https://warontherocks.com/2018/07/the-puzzle-of-russian-behavior-in-deir-al-zour/> (accessed June 19, 2021).
5. Thomas Gibbons-Neff, “How a 4-Hour Battle Between Russian Mercenaries and U.S. Commandos Unfolded in Syria,” *The New York Times*, May 24, 2018, <https://www.nytimes.com/2018/05/24/world/middleeast/american-commandos-russian-mercenaries-syria.html> (accessed June 19, 2021).
6. Maria Tsvetkova, “Russian Toll in Syria Battle Was 300 Killed and Wounded: Sources,” *Reuters*, February 15, 2018, <https://www.reuters.com/article/us-mideast-crisis-syria-russia-casualtie/russian-toll-in-syria-battle-was-300-killed-and-wounded-sources-idUSKCNIFZ2DZ> (accessed June 19, 2021).
7. Luke Harding, “Lawsuit Targets Russian Mercenary Company over Role in Syria,” *The Guardian*, March 15, 2021, <https://www.theguardian.com/world/2021/mar/15/lawsuit-seeks-justice-for-suspected-russian-killing-of-syrian-detainee> (accessed June 19, 2021).
8. 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-idUSKCNIPJ22M> (accessed June 19, 2021).
9. Tom Balmforth, “Russia Sends Lavrov to Venezuela to ‘Counteract’ U.S. Sanctions,” *Reuters*, February 4, 2020, <https://www.reuters.com/article/us-russia-venezuela-lavrov/russia-sends-lavrov-to-venezuela-to-counteract-u-s-sanctions-idUSKBN1ZY19Q> (accessed June 19, 2021).
10. *Reuters*, “Russian Air Force Planes Land in Venezuela Carrying Troops: Reports,” March 24, 2019, <https://www.reuters.com/article/us-venezuela-politics-idUSKCN1R50NB> (accessed June 19, 2021).
11. Andrew Osborn, “Russian Nuclear-Capable Bomber Aircraft Fly to Venezuela, Angering U.S.,” *Reuters*, December 11, 2018, <https://www.reuters.com/article/us-venezuela-russia-airforce/russian-nuclear-capable-bomber-aircraft-fly-to-venezuela-angering-u-s-idUSKBN10A23L> (accessed June 19, 2021).
12. 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 June 19, 2021).
13. International Institute for Strategic Studies, *The Military Balance 2017: The Annual Assessment of Global Military Capabilities and Defence Economics* (London: Routledge, 2017), p. 186.
14. 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 June 19, 2021), and International Institute for Strategic Studies, *The Military Balance 2017*, p. 169.
15. International Institute for Strategic Studies, *The Military Balance 2017*, p. 186.
16. Warsaw Institute, Russia Monitor, “Russia’s Rosgvardia Sets Foot in Belarus,” December 22, 2020, <https://warsawinstitute.org/russias-rosgvardia-sets-foot-belarus/> (accessed June 19, 2021).
17. Press release, “Russia’s Economy Loses Momentum amid COVID-19 Resurgence, Says New World Bank Report,” *The World Bank*, December 16, 2020, <https://www.worldbank.org/en/news/press-release/2020/12/16/russias-economy-loses-momentum-amid-covid-19-resurgence-says-new-world-bank-report> (accessed June 19, 2021).
18. Anna Andrianova, “Russian Economy Rebounding from Covid Slump After Lockdown,” *Bloomberg*, updated April 2, 2021, <https://www.bloomberg.com/news/articles/2021-04-01/russian-economy-continues-climb-from-covid-slump-after-lockdown> (accessed June 19, 2021).
19. Table 1, “The 40 Countries with the Highest Military Expenditure in 2020,” in Diego Lopes Da Silva, Nan Tian, and Alexandra Marksteiner, “Trends in World Military Expenditure, 2020,” Stockholm International Peace Research Institute *Fact Sheet*, April 2021, p. 2, https://sipri.org/sites/default/files/2021-04/fs_2104_milex_0.pdf (accessed June 19, 2021).

20. Andrew S. Bowen, "Russian Armed Forces: Military Modernization and Reforms," Congressional Research Service *In Focus* No. 11603, July 20, 2020, <https://crsreports.congress.gov/product/pdf/IF/IF11603> (accessed June 19, 2021).
21. 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 June 19, 2021).
22. Table 5, "Russian Defence Expenditure as % of GDP," in International Institute for Strategic Studies, *The Military Balance 2021*, p. 174.
23. 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. 2, <https://www.chathamhouse.org/sites/default/files/publications/research/2018-05-10-russia-state-armament-programme-connolly-boulegue-final.pdf> (accessed June 24, 2021).
24. Hans M. Kristensen and Matt Korda, "Russian Nuclear Weapons, 2021," *Bulletin of the Atomic Scientists*, Vol. 77, No. 2 (March 2021), p. 94, <https://www.tandfonline.com/doi/pdf/10.1080/00963402.2021.1885869?needAccess=true> (accessed June 19, 2021).
25. 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 June 19, 2021), 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 June 19, 2021).
26. "Russia's Hypersonic Ballistic Missile and Laser System in Final Tests, Putin Says," *The Moscow Times*, April 11, 2019, <https://www.themoscowtimes.com/2019/04/11/russias-hypersonic-ballistic-missile-laser-system-final-tests-putin-says-a65204> (accessed June 19, 2021).
27. Starchak, "Year 2020 in Review: Results of Russia's Nuclear Weapons Modernization."
28. International Institute for Strategic Studies, *The Military Balance 2017*, p. 159.
29. Tom Bowman, "U.S. Military Advantage over Russia and China 'Eroding,' Pentagon Says," NPR, January 19, 2018, <https://www.npr.org/2018/01/19/579088536/u-s-military-advantage-over-russia-and-china-eroding-says-pentagon> (accessed June 19, 2021).
30. 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 June 24, 2021).
31. "Russia to Receive Advanced Armata Tanks in 2022," *The Moscow Times*, March 4, 2021, <https://www.themoscowtimes.com/2021/03/04/russia-to-receive-advanced-armata-tanks-in-2022-a73149> (accessed June 19, 2021).
32. International Institute for Strategic Studies, *The Military Balance 2021*, p. 170.
33. 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 June 19, 2021).
34. "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 June 19, 2021).
35. Ryan Pickrell, "Russia Is Talking About Scrapping Its Only Aircraft Carrier, Putting the Troubled Ship out of Its Misery," *Business Insider*, April 8, 2019, <https://www.businessinsider.com/russia-is-talking-about-scrapping-kuznetsov-its-only-aircraft-carrier-2019-4> (accessed June 19, 2021).
36. 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 June 19, 2021).
37. 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 June 19, 2021).
38. 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 June 19, 2021).
39. Franz-Stefan Gady, "Russia Lays Down 2 Project 22350 *Admiral Gorshkov*-Class Stealth Frigates," *The Diplomat*, April 24, 2019, <https://thediplomat.com/2019/04/russia-lays-down-2-project-22350-admiral-gorshkov-class-stealth-frigates/> (accessed June 19, 2021).

40. Ibid. and Xavier Vavasseur, "Project 22350 Gorshkov-Class Frigates to Join Russia's Black Sea Fleet," *Naval News*, April 2, 2020, <https://www.navalnews.com/naval-news/2020/04/project-22350-gorshkov-class-frigates-to-join-russias-black-sea-fleet/> (accessed June 19, 2021).
41. 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 June 19, 2021).
42. 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 June 19, 2021).
43. Snehash 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 June 19, 2021).
44. 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 June 19, 2021).
45. Philip, "India Gets Ukrainian Engines for Its Stealth Frigates, Sends Them to Shipbuilder in Russia."
46. International Institute for Strategic Studies, *The Military Balance 2021*, pp. 164 and 171.
47. Sputnik, "Russia Could Go Beyond Planned Series of 10 Borei-Class Nuclear-Powered Subs, Government Says," May 17, 2021, <https://sputniknews.com/military/202105171082913306-russia-could-go-beyond-planned-series-of-10-borei-class-nuclear-powered-subs-government-says/> (accessed June 20, 2021).
48. Dave Makichuk, "Russia's Kalibr Missile Puts US on the Back-Heel," *Asia Times*, March 12, 2021, <https://asiatimes.com/2021/03/russias-kalibr-missile-puts-us-on-the-back-heel/> (accessed June 19, 2021).
49. TASS, "Russian Naval Ship Test-Fires Kalibr Cruise Missile from Arctic Sea," August 31, 2021, <https://tass.com/defense/1332025> (accessed September 1, 2021).
50. 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 June 19, 2021), 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 June 19, 2021).
51. Gao, "Russia's Husky Class Submarine: Armed with Nuclear Torpedoes and Hypersonic Missiles?"
52. International Institute for Strategic Studies, *The Military Balance 2017*, p. 174.
53. 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 June 19, 2021), and International Institute for Strategic Studies, *The Military Balance 2021*, p. 171.
54. International Institute for Strategic Studies, *The Military Balance 2017*, p. 174.
55. Ben Connable, Abby Doll, Alyssa Demus, Dara Massicot, Clint Reach, Anthony Adler, William Mackenzie, Matthew Povlock, and Lauren Skrabala, *Russia's Limit of Advance: Analysis of Russian Ground Force Deployment Capabilities and Limitations*, RAND Corporation, 2020, pp. xvii and 56, https://www.rand.org/pubs/research_reports/RR2563.html (accessed June 19, 2021).
56. Andrew Osborn, "Russia Expands Military Transport Fleet to Move Troops Long Distances," *Reuters*, March 7, 2017, <http://www.reuters.com/article/russia-navy-expansion-idUSL5N1GK470> (accessed June 19, 2021).
57. 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 June 19, 2021).
58. U.S. Defense Intelligence Agency, *Challenges to Security in Space*, released February 11, 2019, p. 23, https://www.dia.mil/Portals/27/Documents/News/Military%20Power%20Publications/Space_Threat_V14_020119_sm.pdf (accessed June 4, 2021). For release date, see news release, "Defense Intelligence Agency Releases Report on Challenges to U.S. Security in Space," Defense Intelligence Agency, February 11, 2019, <https://www.dia.mil/news/articles/article-view/article/1754150/defense-intelligence-agency-releases-report-on-challenges-to-us-security-in-spa/> (accessed June 19, 2021).
59. Sandra Erwin, "Space Force Official: Russian Missile Tests Expose Vulnerability of Low-Orbiting Satellites," *SpaceNews*, December 16, 2020, <https://spacenews.com/space-force-official-russian-missile-tests-expose-vulnerability-of-low-orbiting-satellites/> (accessed June 19, 2021).

60. TASS, "Latest Voronezh Radars to Replace All Russian Existing Airspace Control Systems," February 15, 2021, <https://tass.com/defense/1256441> (accessed June 19, 2021).
61. 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, February 25, 2020, p. 3, https://www.armed-services.senate.gov/imo/media/doc/Wolters_02-25-20.pdf (accessed June 19, 2021). Emphasis in original.
62. Olevs Nikers, "Russia's Offshore 'Missile Tests': Psychologically Undermining the Economic Security of the Baltics," Jamestown Foundation *Eurasia Daily Monitor*, Vol. 15, Issue 74 (May 15, 2018), <https://jamestown.org/program/russias-offshore-missile-tests-psychologically-undermining-the-economic-security-of-the-baltics/> (accessed June 19, 2021), and Michael Birnbaum, "Russia Tests Missiles in the Baltic Sea, a Day After Baltic Leaders Met with Trump," *The Washington Post*, April 4, 2018, https://www.washingtonpost.com/world/europe/russia-tests-missiles-in-the-baltic-sea-a-day-after-baltic-leaders-met-with-trump/2018/04/04/0a35e222-380d-11e8-af3c-2123715f78df_story.html?utm_term=.8f8c10f97f62 (accessed June 19, 2021).
63. Samuel Osborne, "Russian Live Missile Tests Force Latvia to Close Airspace over Baltic Sea: 'It's Hard to Comprehend,'" *The Independent*, April 5, 2018, <https://www.independent.co.uk/news/world/europe/russia-latvia-missile-tests-baltic-sea-airspace-donald-trump-baltic-leaders-white-house-a8289451.html> (accessed June 19, 2021).
64. Nikers, "Russia's Offshore 'Missile Tests': Psychologically Undermining the Economic Security of the Baltics," and Birnbaum, "Russia Tests Missiles in the Baltic Sea, a Day After Baltic Leaders Met with Trump."
65. Osborne, "Russian Live Missile Tests Force Latvia to Close Airspace over Baltic Sea: 'It's Hard to Comprehend.'"
66. Col. 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 June 19, 2021). Article "originally published by [the] Center for European Policy Analysis."
67. 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 June 19, 2021), 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 June 19, 2021).
68. Dave Johnson, "VOSTOK 2018: Ten Years of Russian Strategic Exercises and Warfare Preparation," *NATO Review*, December 20, 2018, <https://www.nato.int/docu/review/2018/Also-in-2018/vostok-2018-ten-years-of-russian-strategic-exercises-and-warfare-preparation-military-exercises/EN/index.htm> (accessed June 19, 2021).
69. U.S. Strategic Command, "Remarks by Gen. Curtis M. Scaparrotti at the 2016 Deterrence Symposium," La Vista, Nebraska, July 27, 2016, <http://www.stratcom.mil/Media/Speeches/Article/986470/2016-deterrence-symposium/> (accessed June 19, 2021).
70. International Institute for Strategic Studies, *The Military Balance 2017*, p. 187.
71. Andrew Higgins, "300,000 Troops and 900 Tanks: Russia's Biggest Military Drills Since Cold War," *The New York Times*, August 28, 2018, <https://www.nytimes.com/2018/08/28/world/europe/russia-military-drills.html> (accessed June 19, 2021).
72. Ibid. and Johnson, "VOSTOK 2018: Ten Years of Russian Strategic Exercises and Warfare Preparation."
73. Mathieu Boulègue, "Russia's Vostok Exercises Were Both Serious Planning and a Show," Chatham House: The Royal Institute of International Affairs, September 17, 2018, <https://www.chathamhouse.org/expert/comment/russia-s-vostok-exercises-were-both-serious-planning-and-show> (accessed June 19, 2021). Also posted on IntelliBriefs, September 18, 2018, <http://intellibriefs.blogspot.com/2018/09/russias-vostok-exercises-were-both.html> (accessed June 19, 2021).
74. Ibid. and Johnson, "VOSTOK 2018: Ten Years of Russian Strategic Exercises and Warfare Preparation."
75. Higgins, "300,000 Troops and 900 Tanks: Russia's Biggest Military Drills Since Cold War," and Sam LaGrone, "China Sent Uninvited Spy Ship to Russian Vostok 2018 Exercise Alongside Troops, Tanks," U.S. Naval Institute News, September 17, 2018, <https://news.usni.org/2018/09/17/china-sent-uninvited-spy-ship-russian-vostok-2018-exercise-alongside-troops-tanks> (accessed June 19, 2021).
76. Vladimir Putin, "On the National Security Strategy of the Russian Federation," Decree of the President of the Russian Federation No. 400, Moscow, July 2, 2021, pp. 11-12, https://www.academia.edu/49526773/National_Security_Strategy_of_the_Russian_Federation_2021 (accessed July 20, 2021).
77. Ibid., p. 12.
78. Connolly and Boulègue, "Russia's New State Armament Programme: Implications for the Russian Armed Forces and Military Capabilities to 2027," p. 16.
79. International Institute for Strategic Studies, *The Military Balance 2017*, p. 15.
80. Kristensen and Korda, "Russian Nuclear Weapons, 2021," p. 90.

81. International Institute for Strategic Studies, *The Military Balance 2017*, p. 15.
82. Tom O'Connor, "Russia Conflict with NATO and U.S. Would Immediately Result in Nuclear War, Russian Lawmaker Warns," *Newsweek*, May 30, 2017, <http://www.newsweek.com/russia-politician-nuclear-weapons-us-nato-crimea-617613> (accessed June 19, 2021).
83. Wolters, statement on EUCOM posture, p. 3.
84. Barry D. Watts, *Nuclear-Conventional Firebreaks and the Nuclear Taboo*, Center for Strategic and Budgetary Assessments, 2013, p. 43, <https://csbaonline.org/uploads/documents/Nuclear-Conventional-Firebreaks-Report1.pdf> (accessed June 19, 2021).
85. Shaun Waterman, "Russia Threatens to Strike NATO Missile Defense Sites," *The Washington Times*, May 3, 2012, <http://www.washingtontimes.com/news/2012/may/3/russia-threatens-strike-nato-missile-defense-sites/?page=all> (accessed June 19, 2021), and 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 June 19, 2021).
86. 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 June 19, 2021).
87. Michael R. Gordon, "U.S. Says Russia Tested Missile, Despite Treaty," *The New York Times*, January 29, 2014, <http://www.nytimes.com/2014/01/30/world/europe/us-says-russia-tested-missile-despite-treaty.html> (accessed June 19, 2021).
88. 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 June 19, 2021).
89. 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 June 19, 2021).
90. 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 June 19, 2021).
91. 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 June 29, 2021), 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. Embassy and Consulates in Russia, August 2, 2019, <https://ru.usembassy.gov/u-s-withdrawal-from-the-inf-treaty-on-august-2-2019/> (accessed June 20, 2021).
92. News release, "Russian Banker Sentenced in Connection with Conspiracy to Work for Russian Intelligence," U.S. Department of Justice, May 25, 2016, <https://www.justice.gov/opa/pr/russian-banker-sentenced-connection-conspiracy-work-russian-intelligence> (accessed June 20, 2021).
93. 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 June 19, 2021).
94. 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 June 19, 2021).
95. 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 June 19, 2021).
96. BBC News, "Sergei Skripal: Who Is the Former Russian Intelligence Officer?" March 29, 2018, <http://www.bbc.com/news/world-europe-43291394> (accessed June 20, 2021); 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 June 20, 2021); 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 June 20, 2021).
97. 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 June 20, 2021).
98. News release, "Statement from the United States, France, Germany, and the United Kingdom on the Attack in Salisbury," The White House, March 15, 2018, <https://ni.usembassy.gov/statement-united-states-france-germany-united-kingdom-attack-salisbury/> (accessed June 20, 2021).

99. 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#.po1WrlWp0 (accessed June 20, 2021).
100. 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 June 20, 2021).
101. BBC News, "US Charges Russian Spies over Yahoo Breach," March 15, 2017, <http://www.bbc.com/news/technology-39281063> (accessed June 20, 2021).
102. Katie Bo Williams, "US Sanctions Russia over Hacking, Expels 35 Officials," *The Hill*, December 29, 2016, <http://thehill.com/policy/national-security/312119-us-announces-sanctions-on-russia> (accessed June 20, 2021).
103. Nadia Schadow 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 June 20, 2021), 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 June 28, 2021).
104. 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 June 20, 2021).
105. 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 June 20, 2021).
106. 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 June 20, 2021).
107. Brett Forrest, "In Cold War Echo, Russia Returns to U.S.'s Backyard," *The Wall Street Journal*, January 31, 2018, <https://www.wsj.com/articles/russia-returns-to-u-s-s-backyard-1517403600> (accessed June 20, 2021).
108. Estonian Foreign Intelligence Service, *International Security and Estonia 2019*, p. 4, <https://www.valisluureamet.ee/pdf/raport-2019-ENG-web.pdf> (accessed June 20, 2021).
109. State Security Department of the Republic of Lithuania and Defence Intelligence and Security Service Under the Ministry of National Defence, *National Threat Assessment 2021*, p. 6, https://www.vsd.lt/wp-content/uploads/2021/03/2021-EN-el_.pdf (accessed June 20, 2021).
110. 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 June 20, 2021).
111. Latvian State Security Service, *Annual Report for 2018*, April 2019, pp. 18–24, <https://vdd.gov.lv/en/useful/publications/annual-report-on-the-activities-of-latvian-state-security-service-in-2018.art139> (accessed June 20, 2021).
112. Per Olaf Salming, "Kremlin Intimidation: Putin Renames Air Force Regiment 'Tallinn Regiment,'" *UpNorth*, January 30, 2018, <https://upnorth.eu/kremlin-intimidation-putin-renames-air-force-regiment-tallinn-regiment/> (accessed June 20, 2021).
113. 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 June 20, 2021).
114. Alexis Mrachek, "Don't Believe Russia's Disinformation About Coronavirus," *The Daily Signal*, April 7, 2020, <https://www.dailysignal.com/2020/04/07/dont-believe-russias-disinformation-about-coronavirus/>.
115. Baltic News Service/TBT Staff, "Fake News About US Troops Posted on BNS Website and Cyber Attack Suspected," *The Baltic Times*, April 13, 2017, http://www.baltictimes.com/fake_news_about_us_troops_posted_on_bns_website_and_cyber_attack_suspected/ (accessed June 20, 2021).
116. BBC News, "Hackers Post Fake Stories on Real News Sites 'to Discredit NATO,'" July 30, 2020, <https://www.bbc.com/news/technology-53594440> (accessed June 20, 2021).
117. 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 June 20, 2021).
118. 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/news/europe/poland-hit-by-wave-of-fake-news-before-start-of-major-military-exercise-with-us-1.631647> (accessed June 20, 2021).

119. 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 June 20, 2021).
120. Atlantic Council, Digital Forensic Research Lab, “#BalticBrief: The Kremlin’s Loudspeaker in Latvia,” November 18, 2018, <https://medium.com/dfrlab/balticbrief-the-kremlins-loudspeaker-in-latvia-14c6398b2473> (accessed June 20, 2021).
121. 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-11e3-8e41-00144feab7de.html> (accessed June 20, 2021).
122. 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 June 20, 2021).
123. Neil MacFarquhar, “Putin Opens Bridge to Crimea, Cementing Russia’s Hold on Neighbor,” *The New York Times*, May 15, 2018, <https://www.nytimes.com/2018/05/15/world/europe/putin-russia-crimea-bridge.html> (accessed June 20, 2021).
124. 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 June 20, 2021).
125. Ann M. Simmons, “New Rail Bridge to Crimea Strengthens Russia’s Hand Against Ukraine,” *The Wall Street Journal*, updated December 26, 2019, <https://www.wsj.com/articles/new-rail-bridge-to-crimea-strengthens-russias-hand-against-ukraine-11577379297> (accessed June 20, 2021).
126. “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-politics/2813512-already-31500-russian-troops-deployed-in-occupied-crimea.html> (accessed June 20, 2021), 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 June 20, 2021).
127. 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 June 20, 2021).
128. 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 June 20, 2021).
129. UNIAN Information Agency, “U.S. Experts Show Russian Military Equipment Transferred to Crimea amid Recent Build-up,” 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 June 20, 2021).
130. Reuters, “Russia Decides to Deploy Nuclear-Capable Strategic Bombers to Crimea: RIA,” March 18, 2019, <https://www.reuters.com/article/us-ukraine-crisis-crimea-bombers-idUSKCN1QZ1WV> (accessed June 20, 2021).
131. Bugajski and Doran, “Black Sea Rising: Russia’s Strategy in Southeast Europe,” p. 3.
132. Gorenburg, “Is a New Russian Black Sea Fleet Coming? Or Is It Here?”
133. Vavasseur, “Project 22350 Gorshkov-Class Frigates to Join Russia’s Black Sea Fleet.”
134. “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 June 20, 2020), and Sam Jones and Kathrin Hille, “Russia’s Military Ambitions Make Waves in the Black Sea,” *Financial Times*, May 13, 2016, <https://next.ft.com/content/1b9c24d8-1819-11e6-b197-a4af20d5575e> (accessed June 20, 2021).
135. Petersen, “The Naval Power Shift in the Black Sea.”
136. 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 June 26, 2021).
137. 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 June 20, 2021).
138. Petersen, “The Naval Power Shift in the Black Sea.”
139. International Institute for Strategic Studies, *The Military Balance 2021*, p. 205.

140. Meetings Coverage and Press Releases, "Situation in Eastern Ukraine Remains 'Tense and Volatile' Despite Post-Ceasefire Reduction in Fighting, Security Council Told During Briefing," U.N. Security Council, December 11, 2015, <https://www.un.org/press/en/2015/sc12154.doc.htm> (accessed June 20, 2021).
141. Reuters, "Two Ukrainian Soldiers Killed in Eastern Ukraine: Military," April 6, 2021, <https://www.reuters.com/article/us-ukraine-crisis-casualties/two-ukrainian-soldiers-killed-in-eastern-ukraine-military-idUSKBN2BT0KV> (accessed June 20, 2021).
142. Crimea.Realities, "Russian Court Leaves Jailed Ukrainian Sailors in Pretrial Detention," Radio Free Europe/Radio Liberty, January 15, 2019, <https://www.rferl.org/a/russian-court-leaves-jailed-ukrainian-sailors-in-pretrial-detention/29711363.html> (accessed June 20, 2021).
143. Ivan Nechepurenko and Andrew Higgins, "Russia and Ukraine Swap Dozens of Prisoners, in a 'First Step to Stop the War,'" *The New York Times*, updated April 9, 2021, <https://www.nytimes.com/2019/09/07/world/europe/russia-ukraine-prisoner-swap.html> (accessed June 20, 2021).
144. Heather Knauert, Spokesperson, statement on "Russia's Harassment of International Shipping Transiting the Kerch Strait and Sea of Azov," U.S. Department of State, August 30, 2018, <https://ru.usembassy.gov/russias-harassment-of-international-shipping-transiting-the-kerch-strait-and-sea-of-azov/> (accessed June 26, 2021).
145. Current Time, Crimea.Realities, and Stuart Greer, "Ukraine's Mariupol Port Struggles to Stay Afloat amid Russian 'Hybrid War,'" Radio Free Europe/Radio Liberty, November 21, 2019, <https://www.rferl.org/a/ukraine-s-mariupol-port-struggles-to-stay-afloat-amid-russian-hybrid-war-/30285170.html> (accessed June 20, 2021).
146. Cory Welt, "Moldova: An Overview," Congressional Research Service *In Focus* No. 10894, updated March 9, 2020, <https://crsreports.congress.gov/product/pdf/download/IF/IF10894/IF10894.pdf/> (accessed June 28, 2021).
147. Radio Free Europe/Radio Liberty, "OSCE Expresses Concern over Russian Forces Actions in Transdnierster," August 16, 2018, <https://www.rferl.org/a/osce-expresses-concerns-russian-forces-transdnierster/29437831.html> (accessed June 20, 2021), and press release, "OSCE Mission to Moldova Concerned About Unsanctioned Military Exercises in the Security Zone," Organization for Security and Co-operation in Europe, August 15, 2018, <https://www.osce.org/mission-to-moldova/390644> (accessed June 20, 2021).
148. 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).
149. 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 June 20, 2021).
150. 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 June 20, 2021), and Sukhankin, "Kaliningrad: From Boomtown to Battle-Station."
151. State Security Department of the Republic of Lithuania and Second Investigation Department Under the Ministry of National Defence, *National Threat Assessment 2019*, p. 22.
152. International Institute for Strategic Studies, *The Military Balance 2020: The Annual Assessment of Global Military Capabilities and Defence Economics* (London: Routledge, 2020), p. 171.
153. 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 June 20, 2021).
154. 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 June 20, 2021).
155. Andrew Osborn, "Russia Approves Warplane Deployment on Disputed Island Near Japan," Reuters, February 2, 2018, <https://uk.reuters.com/article/uk-japan-russia-islands-military/russia-approves-warplane-deployment-on-disputed-island-near-japan-idUKKBN1FM179> (accessed June 20, 2021).
156. Kyodo News, "Russia Plans to Beef up Missile Defense on Northern Kurils, Close to Islands Claimed by Japan," *The Japan Times*, September 3, 2019, <https://www.japantimes.co.jp/news/2019/09/03/national/russia-plans-beef-missile-defense-northern-kurils-close-islands-claimed-japan/> (accessed June 20, 2021).
157. 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 June 20, 2021).

158. Franz-Stefan Gady, "Russia Is Building Military Barracks on Disputed Kuril Islands," *The Diplomat*, December 19, 2018, <https://thediplomat.com/2018/12/russia-is-building-military-barracks-on-disputed-kuril-islands/> (accessed June 20, 2021).
159. Jason Lemon, "Russia Plans to Build up Troops near Western Border to Combat Increasing Threat from NATO," *Newsweek*, May 31, 2021, <https://www.newsweek.com/russia-plans-build-troops-near-western-border-combat-increasing-threat-nato-1596293> (accessed June 20, 2021).
160. Roger McDermott, "Russia's Armed Forces Strengthen Western Military District," Jamestown Foundation *Eurasia Daily Monitor*, Vol. 17, Issue 91 (June 24, 2020), <https://jamestown.org/program/russias-armed-forces-strengthen-western-military-district/> (accessed June 20, 2021).
161. Charles Dick, "Russia Ground Forces Posture Towards the West," Chatham House: The Royal Institute of International Affairs, Russia and Eurasia Programme *Research Paper*, April 2019, p. 12, <https://www.chathamhouse.org/sites/default/files/publications/research/2019-04-04-Dick.pdf> (accessed June 20, 2021).
162. 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 June 20, 2021).
163. 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 June 20, 2021).
164. 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 June 20, 2021).
165. Daniel Brown, "Russia's 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 June 20, 2021).
166. 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 June 24, 2021).
167. Thomas Nilsen, "Russian Bombers Simulated an Attack Against This Radar on Norway's Barents Sea Coast," *The Barents Observer*, March 5, 2018, <https://thebarentsobserver.com/en/security/2018/03/russian-bombers-simulated-attack-against-radar-norways-barents-sea-coast> (accessed June 20, 2021).
168. Thomas Nilsen, "Arctic Challenge 2017 Set for Take Off," *The Barents Observer*, May 16, 2017, <https://thebarentsobserver.com/en/security/2017/05/arctic-challenge-2017-set-take> (accessed June 20, 2019), and Nilsen, "Russian Bombers Simulated an Attack Against This Radar on Norway's Barents Sea Coast."
169. "Russian Pacific Fleet Il-38N MPA Practice ASW in Arctic," Navy Recognition, April 2, 2018, <https://www.navyrecognition.com/index.php/news/defence-news/2018/april-2018-navy-naval-defense-news/6109-russian-pacific-fleet-il-38n-mpa-practice-asw-in-arctic.html> (accessed June 20, 2021).
170. 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 June 20, 2021).
171. 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-b67c5b28d91f03f9340d4a7b4642790> (accessed June 20, 2021).
172. 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 June 20, 2021).
173. 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 June 20, 2021).
174. BBC News, "Putin Creates New National Guard in Russia 'to Fight Terrorism,'" April 6, 2016, <https://www.bbc.com/news/world-europe-35975840> (accessed June 20, 2021).
175. 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 June 20, 2021).
176. 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 June 20, 2021).
177. 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 June 20, 2021).

178. Atle Staalesen, "Shipping on Northern Sea Route Breaks Record," *The Barents Observer*, December 22, 2020, <https://thebarentsobserver.com/en/arctic/2020/12/shipping-northern-sea-route-breaks-record> (accessed June 20, 2021).
179. Pavel Felgenhauer, "Russia Claims Total Military Superiority in the Arctic," Jamestown Foundation *Eurasia Daily Monitor*, Vol. 16, Issue 36 (March 14, 2019), <https://jamestown.org/program/russia-claims-total-military-superiority-in-the-arctic/> (accessed June 20, 2021).
180. 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 June 20, 2021), and Andrew Osborn, "Putin's Russia in Biggest Arctic Military Push Since Soviet Fall," Reuters, January 30, 2017, <http://mobile.reuters.com/article/idUSKBN15EOW0> (accessed June 20, 2021).
181. 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 June 20, 2021).
182. 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 June 20, 2021), 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 June 20, 2021).
183. Robbie Gramer, "Here's What Russia's Military Build-Up in the Arctic Looks Like," *Foreign Policy*, January 25, 2017, http://foreignpolicy.com/2017/01/25/heres-what-russias-military-build-up-in-the-arctic-looks-like-trump-oil-military-high-north-infographic-map/?utm_content=buffer12641&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer (accessed June 20, 2021).
184. David Axe, "Russia's Arctic MiGs can Cover the Country's Entire Northern Shipping Route," *Forbes*, March 18, 2021, <https://www.forbes.com/sites/davidaxe/2021/03/18/russias-arctic-migs-can-cover-the-countrys-entire-northern-shipping-route/?sh=4c9071cb7866> (accessed June 20, 2021).
185. Staalesen, "Navy Pilots Take Off to New Arctic Bases."
186. 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 June 20, 2021).
187. 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 June 20, 2021).
188. 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 June 20, 2021).
189. Nilsen, "Arctic Challenge 2017 Set for Take Off," and Nilsen, "Russian Bombers Simulated an Attack Against This Radar on Norway's Barents Sea Coast."
190. TASS, "Russian Pacific Fleet Il-38N MPA Practice ASW in Arctic," Navy Recognition, April 2018 Naval Defense Industry News, <https://www.navyrecognition.com/index.php/news/defence-news/2018/april-2018-navy-naval-defense-news/6109-russian-pacific-fleet-il-38n-mpa-practice-asw-in-arctic.html> (accessed June 20, 2021).
191. Kyle Mizokami, "Watch Russia Bombers Fly over U.S. Submarines During Arctic Exercise," *Popular Mechanics*, March 12, 2020, <https://www.popularmechanics.com/military/navy-ships/a3144621/russia-bombers-us-submarines/> (accessed June 20, 2021), and 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 June 20, 2021).
192. 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 June 20, 2021).
193. 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 June 20, 2021).
194. Thomas Nilsen, "Work on a Russian Trans-Arctic Fiber Optic Cable Starts This Spring," *The Barents Observer*, April 21, 2021, <https://thebarentsobserver.com/en/industry-and-energy/2021/04/work-trans-arctic-fiber-optic-cable-starts-may> (accessed June 20, 2021).
195. 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 June 20, 2021).

196. 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 June 20, 2021).
197. 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 June 27, 2021).
198. 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 June 20, 2021); 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 June 20, 2021).
199. 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-idUSKCN26DIFO> (accessed June 20, 2021).
200. 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 June 20, 2021).
201. Gorenburg, "Russia's New and Unrealistic Naval Doctrine."
202. Brown, "Russia's NATO Northern Fleet Beefs up Its Nuclear Capabilities to Phase 'NATO Out of Arctic.'"
203. 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 June 20, 2021).
204. 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-secreive-submarine-with-6-nuclear-doomsday-devices-2019-3> (accessed June 20, 2021). 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 June 20, 2021), 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 June 20, 2021).
205. Lockie, "Russia Says It's Going to Arm a Submarine with 6 Nuclear 'Doomsday' Devices."
206. 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 June 20, 2021).
207. TASS, "Russia's Khabarovsk Submarine to Be Launched in Fall 2021," *Naval News*, April 19, 2021, <https://www.navalnews.com/naval-news/2021/04/russias-khabarovsk-submarine-to-be-launched-in-fall-2021/> (accessed June 20, 2021).
208. 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://fas.org/sgp/crs/misc/R41153.pdf> (accessed June 20, 2021).
209. Civil Georgia, "Moscow, Sokhumi Endorse Final Text of New Treaty," November 22, 2014, <http://www.civil.ge/eng/article.php?id=27841> (accessed June 20, 2021).
210. 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 June 20, 2021).
211. 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 June 20, 2021), 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 June 20, 2021).
212. News release, "Georgia—Javelin Missiles and Command Launch Units," U.S. Department of Defense, Defense Security Cooperation Agency, November 20, 2017, <http://www.dsca.mil/major-arms-sales/georgia-javelin-missiles-and-command-launch-units> (accessed June 20, 2021), and Agenda.ge, "After Javelins Georgia to Receive Further Defence Weaponry from US, Stingers," June 20, 2018, <https://agenda.ge/en/news/2018/1321> (accessed June 20, 2021).

213. 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 June 20, 2021).
214. 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/#.Xs57tRzL2g.twitter> (accessed June 20, 2021).
215. 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 June 20, 2021).
216. International Institute for Strategic Studies, *The Military Balance 2020*, p. 184.
217. 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 June 20, 2021).
218. 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 June 20, 2021).
219. In 1991, the Azerbaijan SSR Parliament dissolved the Nagorno-Karabakh Autonomous Oblast and divided the area among five rayons (administrative regions) in Azerbaijan.
220. Luke Coffey, "Winners and Losers of the Second Karabakh War," *Arab News*, November 21, 2020, <https://www.arabnews.com/node/1766356> (accessed June 20, 2021).
221. Andrew Kramer, "Facing Military Debacle, Armenia Accepts a Deal in Nagorno-Karabakh War," *The New York Times*, updated February 25, 2021, <https://www.nytimes.com/2020/11/09/world/middleeast/armenia-settlement-nagorno-karabakh-azerbaijan.html> (accessed June 20, 2021).
222. 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 June 20, 2021).
223. Jack Farchy, "Russia Senses Opportunity in Nagorno-Karabakh Conflict," *Financial Times*, April 19, 2016, <https://next.ft.com/content/3d485610-0572-11e6-9b51-0fb5e65703ce> (accessed June 20, 2021), and 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 June 20, 2021).
224. 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 June 20, 2021).
225. Editorial Board, "The Lessons of Idlib," *The Wall Street Journal*, March 3, 2020, <https://www.wsj.com/articles/the-lessons-of-idlib-11583281376> (accessed June 29, 2021).
226. 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-idUSKBN1EK0HD> (accessed June 28, 2021).
227. 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 June 20, 2021).
228. 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 June 20, 2021).
229. 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 June 20, 2021).
230. 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 June 20, 2021).
231. 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 June 20, 2021).
232. Atlantic Council, Digital Forensic Research Lab, "#PutinAtWar: Russia Fortifies Air Base in Khmeimim," November 11, 2018, <https://medium.com/dfirlab/putinatwar-russia-fortifies-air-base-in-khmeimim-803f4cc07946> (accessed June 20, 2021).

233. 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 June 20, 2021).
234. BBC News, "Russia Used Syria as Live-Fire Training—US General," December 22, 2016, <http://www.bbc.com/news/world-europe-38402506> (accessed June 20, 2021).
235. International Institute for Strategic Studies, *The Military Balance 2019: The Annual Assessment of Global Military Capabilities and Defence Economics* (London: Routledge, 2019), p. 168.
236. 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 June 20, 2021).
237. Associated Press, "Putin Hails Russian Arms Sales Abroad," December 16, 2019, <https://apnews.com/10890594de4c91991cd3c1babdf6406d> (accessed June 20, 2021).
238. 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 June 20, 2021).
239. 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 June 20, 2021).
240. 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 June 20, 2021).
241. Radio Free Europe/Radio Liberty, "Putin, Egyptian Leader Sign 'Strategic' Partnership Treaty," October 17, 2018, <https://www.rferl.org/a/putin-egyptian-leader-el-sissi-discuss-increasing-arms-sales-direct-air-links-moscow-visit-sochi/29547819.html> (accessed June 20, 2021).
242. Vladimir Isachenkov, "Russia Negotiates Deal for Its Warplanes to Use Egypt Bases," Associated Press, November 30, 2017, <https://apnews.com/bdfae4502ca74cleacdbf6d3225e8f4> (accessed June 20, 2021).
243. "Russia Secures \$2Bln 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 June 20, 2021).
244. Derek Bisaccio, "Su-35 Production for Egypt Begins," Defense & Security Monitor Blog, May 18, 2020, <https://dsm.forecastinternational.com/wordpress/2020/05/18/egyptian-su-35-production-begins/> (accessed June 20, 2021).
245. 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 June 20, 2021).
246. 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 June 20, 2021).
247. 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 June 20, 2021).
248. Radio Free Europe/Radio Liberty, "Russian Fighters Intercept U.S. Aircraft, Risk Midair Collision, U.S. Navy Says," May 27, 2020, <https://www.rferl.org/a/us-navy-russia-su35-aircraft/30636592.html> (accessed June 20, 2021).
249. 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 June 20, 2021).
250. 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 June 20, 2021).
251. 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>.
252. Leonid Bershidsky, "Russia Re-Enacts the Great Game in the Balkans," Bloomberg, corrected January 20, 2017, <https://www.bloomberg.com/view/articles/2017-01-19/russia-re-enacts-the-great-game-in-the-balkans> (accessed June 20, 2021).
253. Andrew E. Cramer and Joseph Orovic, "Two Suspected Russian Agents Among 14 Convicted in Montenegro Coup Plot," *The New York Times*, May 9, 2019, <https://www.nytimes.com/2019/05/09/world/europe/montenegro-coup-plot-gru.html> (accessed June 20, 2021).

254. 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 June 20, 2021).
255. Andrew Rettman, "Nato to Add Macedonia Despite Putin Warning," *EUobserver*, February 7, 2019, <https://euobserver.com/foreign/144109> (accessed June 20, 2021).
256. Helene Cooper and Eric Schmitt, "U.S. Spycraft and Stealthy Diplomacy Expose Russian Subversion in a Key Balkans Vote," *The New York Times*, October 9, 2018, <https://www.nytimes.com/2018/10/09/us/politics/russia-macedonia-greece.html> (accessed June 20, 2021).
257. *Ibid.*
258. Kochis, "A Roadmap for Strengthened Transatlantic Pathways in the Western Balkans," p. 9.
259. *Ibid.*, p. 4.
260. Dusan Stojanovic, "Another European Country Has Bought Russian Anti-Aircraft Weapons at Putin's Suggestion—and over US Warnings," *Business Insider*, February 24, 2020, <https://www.businessinsider.com/more-russian-weapons-for-serbia-despite-us-sanction-threats-2020-2> (accessed June 20, 2021).
261. 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 20, 2021).
262. 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 June 20, 2021).
263. 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 June 20, 2021).
264. Radio Free Europe/Radio Liberty, "On Visit to Serbia, Putin Accuses Kosovo of 'Illegally' Setting up an Army," January 17, 2019, <https://www.rferl.org/a/ahead-of-high-level-visit-to-serbia-putin-blasts-west-s-role-in-balkans/29714843.html> (accessed June 20, 2021).
265. 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 June 20, 2021).
266. Srpska Republika News Agency and N1 Sarajevo, "RS President: Republika Srpska Has Very Good Relations with Serbia and Russia," N1, January 5, 2019, <http://rs.n1info.com/English/NEWS/a449708/RS-President-Republika-Srpska-has-very-good-relations-with-Serbia-and-Russia.html> (accessed June 20, 2021).
267. Reuters, "Russia Backs Bosnia's Integrity amid Serb Calls for Secession," September 21, 2018, <https://www.reuters.com/article/us-bosnia-russia/russia-backs-bosnias-integrity-amid-serb-calls-for-secession-idUSKCN1M11Q4> (accessed June 20, 2021).
268. 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 June 20, 2021), 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 June 20, 2021).
269. 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 June 19, 2021).
270. Andrew Byrne, "Bosnian Serb Forces Take Part in Illegal 'Statehood Day' Parade," *Financial Times*, January 9, 2017, <https://www.ft.com/content/5ffff694-d66f-11e6-944b-e7eb37a6aa8e> (accessed June 20, 2021).
271. Talha Ozturk and Gorana Jakovljevic, "Bosnian Serbs Celebrate Statehood Day Defying Court Ban," *Anadolu Agency*, January 9, 2020, <https://www.aa.com.tr/en/europe/bosnian-serbs-celebrate-statehood-day-defying-court-ban/1698046#> (accessed June 20, 2021).
272. Thea Morrison, "Georgia's Breakaway S.Ossetia Signs Agreements with Republika Srpska," *Georgia Today*, January 11, 2018, <http://georgiatoday.ge/news/8733/Georgia%E2%80%99s-Breakaway-S.Ossetia-Signs-Agreements-with-Republika-Srpska> (accessed June 20, 2021).
273. 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 June 20, 2021).

274. 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 June 20, 2021).
275. Ibid.
276. 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 June 20, 2021).
277. Christopher Woody, "'Good Luck, Guys': 17 Russian Jets Buzzed a British Destroyer and Left a Threatening Message Earlier This Year," *Business Insider*, November 27, 2018, <https://www.businessinsider.com/17-russian-jets-buzzed-a-british-destroyer-in-the-black-sea-2018-11> (accessed June 20, 2021).
278. Reuters, "As Syria Tensions Surge, Russian Fighter Jet Buzzes French Warship in Breach of International Law," *The Japan Times*, April 11, 2018, https://www.japantimes.co.jp/news/2018/04/11/world/syria-tensions-surge-russian-fighter-jet-buzzes-french-warship-breach-international-law/#:Wx_gGlpKjcs (accessed June 20, 2021).
279. 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 June 20, 2021).
280. 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 June 20, 2021), 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 June 20, 2021).
281. 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 June 20, 2021).
282. 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 June 20, 2021).
283. Ibid.
284. 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 June 20, 2021).
285. 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 June 20, 2021).
286. Jelena Ćirić, "Russian Bombers Enter NATO Airspace Near Iceland," *Iceland Review*, March 19, 2019, <https://www.icelandreview.com/news/russian-bombers-enter-nato-airspace-near-iceland/> (accessed June 20, 2021), and Larissa Kyzer, "Russian Bombers Re-Enter NATO Airspace Near Iceland," *Iceland Review*, March 29, 2019, <https://www.icelandreview.com/news/russian-bombers-reenter-nato-airspace-near-iceland/> (accessed June 20, 2021).
287. 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 June 20, 2021).
288. Carlos M. Vazquez II and Aya Ichihashi, "Russian Bombers Violated Japan's Airspace Twice in One Day, Defense Ministry Says," *Stars and Stripes*, June 21, 2019, <https://www.stripes.com/news/pacific/russian-bombers-violated-japan-s-airspace-twice-in-one-day-defense-ministry-says-1.586945> (accessed June 20, 2021).
289. Franz-Stefan Gady, "Japan Scrambles Fighter Jets to Intercept Russian Military Reconnaissance Plane," *The Diplomat*, March 29, 2019, <https://thediplomat.com/2019/03/japan-scrambles-fighter-jets-to-intercept-russian-military-reconnaissance-plane/> (accessed June 20, 2021), and 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 June 20, 2021).
290. 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 June 20, 2021).
291. Gady, "Japan Scrambles Fighter Jets to Intercept 2 Russian Military Aircraft."
292. Reuters, "Russia Scrambles Fighter Jet to Escort NATO Planes over Black Sea," *The Jerusalem Post*, December 7, 2020, <https://www.jpost.com/breaking-news/russia-scrambles-fighter-jet-to-escort-nato-planes-over-black-sea-651422> (accessed June 20, 2021).

293. News release, "NATO Jets Intercept Russian 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 June 20, 2021).
294. News release, "NATO Fighter Jets Intercept Russian Military Aircraft over the Baltic Sea," North Atlantic Treaty Organization, Allied Air Command, April 21, 2021, https://ac.nato.int/archive/2021/20210420_Baltic_Intercepts (accessed June 20, 2021).
295. Nilsen, "Russian Sub Hunters Worry Air Traffic Controllers. Norway Scrambled F-16s and F-35s."
296. 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 June 20, 2021).
297. 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 June 20, 2021).
298. BBC News, "Russian Military Admits Significant Cyber-War Efforts," February 23, 2017, <http://www.bbc.com/news/world-europe-39062663> (accessed June 20, 2021).
299. Daniel R. Coats, Director of National Intelligence, "Worldwide Threat Assessment of the US Intelligence Community," statement before the Select Committee on Intelligence, U.S. Senate, January 29, 2019, p. 6, <https://www.dni.gov/files/ODNI/documents/2019-ATA-SFR---SSCI.pdf> (accessed June 20, 2021).
300. David Sanger, "Russian Hackers Broke into Federal Agencies, U.S. Officials Suspect," *The New York Times*, May 10, 2021, <https://www.nytimes.com/2020/12/13/us/politics/russian-hackers-us-government-treasury-commerce.html?login=smartlock&auth=login-smartlock> (accessed June 24, 2021).
301. Ibid.
302. David E. Sanger, Nicole Perlroth, and Eric Schmitt, "Scope of Russian Hacking Becomes Clear: Multiple U.S. Agencies Were Hit," *The New York Times*, updated May 10, 2021, <https://www.nytimes.com/2020/12/14/us/politics/russia-hack-nsa-homeland-security-pentagon.html> (accessed June 20, 2021).
303. "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 June 20, 2021).
304. 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 June 20, 2021), and Michael Schwartz and Nicole Perlroth, "DarkSide, Blamed for Gas Pipeline Attack, Says It Is Shutting Down," *The New York Times*, updated June 8, 2021, <https://www.nytimes.com/2021/05/14/business/darkside-pipeline-hack.html> (accessed June 20, 2021).
305. 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 June 20, 2021).
306. Ryan Browne, "Hackers Behind Colonial Pipeline Attack Reportedly Received \$90 Million in Bitcoin Before Shutting Down," CNBC, May 18, 2021, <https://www.cnn.com/2021/05/18/colonial-pipeline-hackers-darkside-received-90-million-in-bitcoin.html> (accessed June 20, 2021).
307. 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/departments-justice-seizes-23-million-cryptocurrency-paid-ransomware-extortionists-darkside> (accessed June 19, 2021).
308. BBC News, "JBS: FBI Says Russia-Linked Group Hacked Meat Supplier," June 3, 2021, <https://www.bbc.com/news/world-us-canada-57338896> (accessed June 19, 2021).
309. 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 June 19, 2021).
310. David E. Sanger and Marc Santora, "U.S. and Allies Blame Russia for Cyberattack on Republic of Georgia," *The New York Times*, updated February 21, 2020, <https://www.nytimes.com/2020/02/20/world/europe/georgia-cyberattack-russia.html> (accessed June 19, 2021).
311. 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 June 19, 2021).
312. Office of the Director of National Intelligence, "Annual Threat Assessment of the US Intelligence Community," April 9, 2021, p. 9, <https://www.dni.gov/files/ODNI/documents/assessments/ATA-2021-Unclassified-Report.pdf> (accessed June 19, 2021).

Iran

James Phillips

Radical Islamist terrorism in its many forms remains the most immediate global threat to the safety and security of U.S. citizens at home and abroad, and Iran-supported terrorists and proxy militias pose some of the greatest potential threats. The Lebanon-based Hezbollah (Party of God) has a long history of executing terrorist attacks against American targets in the Middle East at Iran's direction, and it could be activated to launch attacks inside the United States in the event of a conflict with Iran. Such state-sponsored terrorist attacks pose the greatest potential Iranian threats to the U.S. homeland, at least until Iran develops a long-range ballistic missile capable of targeting and reaching the United States.

Threats to the Homeland

Hezbollah Terrorism. Hezbollah, the radical Lebanon-based Shia revolutionary movement, poses a clear terrorist threat to international security. Hezbollah terrorists have murdered Americans, Israelis, Lebanese, Europeans, and citizens of many other nations. Originally founded with support from Iran in 1982, this Lebanese group has evolved from a local menace into a global terrorist network that is strongly backed by regimes in Iran and Syria. Its political wing has dominated Lebanese politics and is funded by Iran and a web of charitable organizations, criminal activities, and front companies.

Hezbollah regards terrorism not only as a useful tool for advancing its revolutionary agenda, but also as a religious duty as part of

a “global jihad.” It helped to introduce and popularize the tactic of suicide bombings in Lebanon in the 1980s, developed a strong guerrilla force and a political apparatus in the 1990s, provoked a war with Israel in 2006, intervened in the Syrian civil war after 2011 at Iran's direction, and has become a major destabilizing influence in the ongoing Arab-Israeli conflict.

Before September 11, 2001, of all of the world's terrorist groups, Hezbollah had murdered the most Americans. Despite al-Qaeda's increased visibility since then, Hezbollah remains a bigger, better equipped, better organized, and potentially more dangerous terrorist organization, partly because it enjoys the support of the world's two chief state sponsors of terrorism: Iran and Syria. Hezbollah's demonstrated capabilities led former Deputy Secretary of State Richard Armitage to dub it “the A-Team of Terrorists.”¹

Hezbollah has expanded its operations from Lebanon to regional targets in the Middle East and far beyond the region. Today, it is a global terrorist threat that draws financial and logistical support from its Iranian patrons as well as from the Lebanese Shiite diaspora in the Middle East, Europe, Africa, Southeast Asia, North America, and South America. Hezbollah fundraising and equipment procurement cells have been detected and broken up in the United States and Canada, and Europe is believed to contain many more of these cells.

Hezbollah has been involved in numerous terrorist attacks against Americans, including:

- The April 18, 1983, bombing of the U.S. embassy in Beirut, which killed 63 people including 17 Americans;
- The October 23, 1983, suicide truck bombing of the Marine barracks at Beirut Airport, which killed 241 Marines and other personnel deployed as part of the multinational peacekeeping force in Lebanon;
- The September 20, 1984, suicide truck bombing of the U.S. embassy annex in Lebanon, which killed 23 people including two Americans; and
- The June 25, 1996, Khobar Towers bombing, which killed 19 American servicemen stationed in Saudi Arabia.

In addition:

- Hezbollah operatives were later found to have been responsible for the 1984 murder of American University of Beirut President Malcolm Kerr and the June 14, 1985, murder of U.S. Navy diver Robert Stethem, who was a passenger on TWA Flight 847, which was hijacked and diverted to Beirut International Airport.
- In March 1984, Hezbollah kidnapped William Buckley, the CIA station chief in Beirut, who died in captivity in 1985 after being tortured for more than a year.²
- Hezbollah was involved in the kidnapping of several dozen Westerners, including 14 Americans, who were held as hostages in Lebanon in the 1980s. The American hostages eventually became pawns that Iran used as leverage in the secret negotiations that led to the Iran–Contra affair in the mid-1980s.
- Hezbollah kidnapped Colonel William Higgins, a Marine officer serving with the United Nations Truce Supervision

Organization in Lebanon, in February 1988 and killed him in 1989.

Hezbollah has launched numerous attacks outside of the Middle East. It perpetrated the two deadliest terrorist attacks in the history of South America: the March 1992 bombing of the Israeli embassy in Buenos Aires, Argentina, which killed 29 people, and the July 1994 bombing of a Jewish community center in Buenos Aires that killed 96 people. The trial of those who were implicated in the 1994 bombing revealed an extensive Hezbollah presence in Argentina and other countries in South America.

Hezbollah has escalated its terrorist attacks against Israeli targets in recent years as part of Iran's shadow war against Israel. In 2012, Hezbollah killed five Israeli tourists and a Bulgarian bus driver in a suicide bombing near Burgas, Bulgaria. Hezbollah terrorist plots against Israelis were foiled in Thailand and Cyprus during that same year.

Hezbollah deployed personnel to Iraq after the 2003 U.S. intervention to assist pro-Iranian Iraqi Shia militias that were battling the U.S.-led coalition. In addition, Hezbollah has deployed personnel in Yemen to train and assist the Iran-backed Houthi rebels. In 2013, Hezbollah admitted that it had deployed several thousand militia members to fight in Syria on behalf of the Assad regime. By 2015, Hezbollah forces had become crucial to the survival of the Assad regime after the Syrian army was hamstrung by casualties, defections, and low morale.

Although Hezbollah operates mostly in the Middle East, it has a global reach and has established a presence inside the United States. Cells in the United States generally are focused on fundraising, including criminal activities such as those perpetrated by over 70 used-car dealerships identified as part of a scheme to launder hundreds of millions of dollars of cocaine-generated revenue that flowed back to Hezbollah.³

Covert Hezbollah cells could morph into other forms and launch terrorist operations

inside the United States. Given Hezbollah's close ties to Iran and past record of executing terrorist attacks on Tehran's behalf, there is a real danger that Hezbollah terrorist cells could be activated inside the United States in the event of a conflict between Iran and the U.S. or between Iran and Israel.

On June 1, 2017, two naturalized U.S. citizens were arrested and charged with providing material support to Hezbollah and conducting preoperational surveillance of military and law enforcement sites in New York City and at Kennedy Airport, the Panama Canal, and the American and Israeli embassies in Panama.⁴ Nicholas Rasmussen, then Director of the National Counterterrorism Center, noted that the June arrests were a "stark reminder" of Hezbollah's global reach and warned that Hezbollah "is determined to give itself a potential homeland option as a critical component of its terrorism playbook," which "is something that those of us in the counterterrorism community take very, very seriously."⁵

On July 9, 2019, a New Jersey man who served as a U.S.-based operative for Hezbollah's terrorism-planning wing for years, was arrested and charged with providing material support to the terrorist group. Alexei Saab, a 42-year-old Lebanese immigrant and naturalized U.S. citizen, scouted such New York City landmarks as the Statue of Liberty and the Empire State Building for possible attacks. When he was indicted in September 2019, he was at least the third American to have been charged since 2017 with being an agent for Hezbollah.⁶

In January 2020, after a spate of attacks on U.S. military personnel and the U.S. embassy in Iraq provoked a U.S. unmanned aerial vehicle (UAV) strike that killed Iranian General Qassem Soleimani, leader of the Quds Force of Iran's Islamic Revolutionary Guard Corps (IRGC), U.S. intelligence officials warned about the potential Hezbollah threat to the U.S. homeland. The Department of Homeland Security warned in a January 4, 2020, bulletin that "Iran and its partners, such as Hizballah, have demonstrated the intent and capability to conduct operations in the United States."⁷

Four days later, the U.S. intelligence community warned that if Iran decided to carry out a retaliatory attack in the United States, it "could act directly or enlist the cooperation of proxies and partners, such as Lebanese Hezbollah."⁸ Then, on January 12, 2020, Hezbollah leader Hassan Nasrallah publicly threatened U.S. forces in the Middle East: "The U.S. administration and the assassins will pay a heavy price, and they will discover their miscalculation."⁹

Hezbollah also has a long history of cooperation with criminal networks. On May 27, 2020, U.S. prosecutors announced the indictment of a former Venezuelan politician who sought to recruit terrorists from Hezbollah and Hamas to orchestrate attacks against U.S. interests. Adel El Zabayar, a Venezuelan citizen of Syrian descent who is a close associate of Venezuelan President Nicolás Maduro, traveled to the Middle East in 2014 to obtain weapons and recruit members of Hezbollah and Hamas to train at hidden camps in Venezuela. The goal of this "unholy alliance," according to the U.S. Attorney's Office for the Southern District of New York, was to "create a large terrorist cell capable of attacking United States interests on behalf of the Cartel de Los Soles," a criminal organization that "conspired to export literally tons of cocaine into the U.S."¹⁰

Iran's Ballistic Missile Threat. Iran has an extensive missile development program that has received key assistance from North Korea, as well as more limited support from Russia and China until the imposition of sanctions by the U.N. Security Council. Although the U.S. intelligence community assesses that Iran does not have an ICBM capability (an intercontinental ballistic missile with a range of 5,500 kilometers or about 2,900 miles), Tehran could develop one in the future. Iran is not likely to develop missiles capable of reaching the United States until 2025 at the earliest.¹¹ Iran has launched several satellites with space launch vehicles that use similar technology, which could also be adapted to develop an ICBM capability.¹²

On April 22, 2020, Iran launched a military satellite with a new launch vehicle that

includes such new features as a light carbon fiber casing and a moving nozzle for flight control that is also used in long-range ballistic missiles—clear evidence that Iran continues to improve its capabilities.¹³ Tehran's missile arsenal primarily threatens U.S. bases and allies in the Middle East, but Iran eventually could expand the range of its missiles to include the continental United States. Iran is the only country in history that has developed missiles with a range of 2,000 kilometers without first having nuclear weapons.

Threat of Regional War

The Middle East region is one of the most complex and volatile threat environments faced by the United States and its allies. Iran, Hezbollah, and Iran-supported proxy groups pose actual or potential threats both to America's interests and to those of its allies.

Iranian Threats in the Middle East. Iran is led by an anti-Western revolutionary regime that seeks to tilt the regional balance of power in its favor by driving out the U.S. military presence, undermining and overthrowing opposing governments, and establishing its hegemony over the oil-rich Persian Gulf region. It also seeks to radicalize Shiite communities and advance their interests against Sunni rivals. Iran has a long record of sponsoring terrorist attacks against American targets and U.S. allies in the region.

Iran's conventional military forces, although relatively weak by Western standards, loom large compared to those of Iran's smaller neighbors. Iran's armed forces remain dependent on major weapons systems and equipment that date back to before the country's 1979 revolution. The regime's ability to maintain or replace these aging weapons systems, many of which were depleted in the 1980–1988 Iran–Iraq war, has been limited by Western sanctions. Iran has not been able to import large numbers of modern armor, combat aircraft, longer-range surface-to-surface missiles, or major naval warships.

Tehran, however, has managed to import modern Russian and Chinese air-to-air,

air-to-ground, air defense, anti-armor, and anti-ship missiles to upgrade its conventional military and asymmetric forces.¹⁴ It also has developed its capacity to reverse engineer and build its own versions of ballistic missiles, rockets, UAVs, minisubmarines, and other weapon systems. To compensate for its limited capability to project conventional military power, Tehran has focused on building up its asymmetric warfare capabilities, proxy forces, and ballistic missile and cruise missile capabilities. For example, partly because of the limited capabilities of its air force, Iran developed UAVs during the Iran–Iraq war, including at least one armed model that carried up to six RPG-7 rounds in what was perhaps the world's first use of UAVs in combat.¹⁵

The July 2015 Iran nuclear agreement, which lifted nuclear-related sanctions on Iran in January 2016, gave Tehran access to about \$100 billion in restricted assets and allowed Iran to expand its oil and gas exports, the chief source of its state revenues. Relief from the burden of sanctions helped Iran's economy and enabled Iran to enhance its strategic position, military capabilities, and support for surrogate networks and terrorist groups.

In May 2016, Tehran announced that it was increasing its military budget for 2016–2017 to \$19 billion—90 percent more than the previous year's budget.¹⁶ Estimating total defense spending is difficult because of Tehran's opaque budget process and the fact that spending on some categories, including Iran's ballistic missile program and military intervention in Syria, is hidden, but the International Institute for Strategic Studies estimates that Iran's defense spending fell from \$21.9 billion in 2018 to \$17.4 billion in 2019.¹⁷ In 2020, defense spending declined again to an estimated \$14.1 billion.¹⁸

The lifting of sanctions also enabled Tehran to emerge from diplomatic isolation and strengthen strategic ties with Russia. Russian President Vladimir Putin traveled to Iran in November 2015 to meet with Supreme Leader Ayatollah Ali Khamenei and other officials. Both regimes called for enhanced military cooperation. During Iranian President Hassan

Rouhani's visit to Russia in March 2017, Putin proclaimed his intention to raise bilateral relations to the level of a "strategic partnership."¹⁹ On June 9, 2018, during the Shanghai Cooperation Organization (SCO) summit, Putin noted that Iran and Russia were "working well together to settle the Syrian crisis" and promised Rouhani that he would support Iran's entry into the SCO.²⁰ On September 16, 2019, in Ankara, Turkey, ahead of a trilateral meeting with Turkish President Recep Tayyip Erdogan to discuss the situation in Syria, the two presidents met again, and Putin praised Iran's support for the Assad regime.

This growing strategic relationship has strengthened Iran's military capabilities. Tehran announced in April 2016 that Russia had begun deliveries of up to five S-300 Favorit long-range surface-to-air missile systems, which can track up to 100 aircraft and engage six of them simultaneously at a range of 200 kilometers.²¹ The missile system, which was considered a defensive weapon not included in the U.N. arms embargo on Iran, was deployed and became operational in 2017, giving Iran a "generational improvement in capabilities" according to Defense Intelligence Agency Director Lieutenant General Robert Ashley.²²

In 2016, Iranian Defense Minister Hossein Dehghan traveled to Moscow "to negotiate a series of important weapons deals with Russia" that included the purchase of advanced Sukhoi Su-30 Flanker fighter jets. These warplanes would significantly improve Iran's air defense and long-range strike capabilities, although under the terms of the 2015 Iran nuclear agreement, they could not be delivered until after the U.N. arms embargo expired in October 2020. It was also reported that Tehran was "close to finalizing a deal for purchase and licensed production of Russia's modern T-90S main battle tank."²³

Russia and Iran have not announced any arms deals since the expiration of the U.N. arms embargo. Moscow may be waiting to see whether the Iran nuclear agreement can be renegotiated, thereby enabling it to receive payments from Iran after U.S. financial sanctions are lifted.

After the 2015 nuclear agreement, Iran and Russia escalated their strategic cooperation in propping up Syria's embattled Assad regime. Iran's growing military intervention in Syria was partly eclipsed by Russia's military intervention and launching of an air campaign against Assad's enemies in September 2015, but Iran's Islamic Revolutionary Guard Corps and surrogate militia groups have played the leading role in spearheading the ground offensives that have retaken territory from Syrian rebel groups and tilted the military balance in favor of Assad's regime. By October 2015, Iran had deployed an estimated 7,000 IRGC troops and paramilitary forces in Syria, along with an estimated 20,000 Iran-backed Shiite militia fighters from Lebanon, Iraq, Afghanistan, and Pakistan.²⁴ Tehran escalated to deploy a force of almost 80,000 Shia militia fighters commanded by nearly 2,000 IRGC officers.²⁵

Working closely with Russia, Iran then expanded its military efforts and helped to consolidate a costly victory for the Assad regime. At the height of the fighting in August 2016, Russia temporarily deployed Tu-22M3 bombers and Su-34 strike fighters to an air base at Hamedan in western Iran in order to strike rebel targets in Syria.²⁶ After the fall of Aleppo in December 2016, which inflicted a crushing defeat on the armed opposition, Tehran sought to entrench a permanent Iranian military presence in Syria, establishing an elaborate infrastructure of military bases, intelligence centers, UAV airfields, missile sites, and logistical facilities. The IRGC also sought to secure a logistical corridor to enable the movement of heavy equipment, arms, and matériel through Iraq and Syria to bolster Hezbollah in Lebanon.

Iran's military presence in Syria and continued efforts to provide advanced weapons to Hezbollah through Syria have fueled tensions with Israel. Israel has launched more than 2,000 air strikes against Hezbollah and Iranian forces to prevent the transfer of sophisticated arms and prevent Iran-backed militias from deploying near Israel's border. On February 10, 2018, Iranian forces in Syria launched an armed drone that penetrated Israeli airspace

before being shot down. Israel responded with air strikes on IRGC facilities in Syria. Iranian forces in Syria later launched a salvo of 20 rockets against Israeli military positions in the Golan Heights on May 9, 2018, provoking Israel to launch ground-to-ground missiles, artillery salvos, and air strikes against all known Iranian bases in Syria.²⁷

Although Russia reportedly helped to arrange the withdrawal of Iranian heavy weapons to positions 85 kilometers from Israeli military positions in the Golan Heights, Moscow has “turned a blind eye” to Iranian redeployments and the threat that long-range Iranian weapon systems deployed in Syria pose to Israel.²⁸ On January 13, 2019, Israel launched an air strike against an Iranian arms depot at Damascus International Airport, and the Israeli government revealed that it had launched over 2,000 missiles at various targets in Syria in 2018.²⁹ Israel remains determined to prevent Iran from establishing forward bases near its borders, and another clash could rapidly escalate into a regional conflict.

By early 2020, Iran reportedly had reduced its military forces in Syria after successfully defeating the rebel military challenge to the Assad regime.³⁰ Iran continues to bolster the strength of its proxies and allies in Syria, however, particularly Hezbollah, which has embedded itself in the Syrian army’s 1st Corps and is recruiting Syrian fighters near the Golan Heights for future attacks on Israel.³¹ Israel launched a series of air strikes against Iranian forces and proxy militias in eastern Syria in January 2021, reportedly to prevent Iranian ballistic missiles, cruise missiles, and UAVs that have been deployed in western Iraq from being deployed inside Syria.³² Israel also has targeted Iranian forces and ballistic missiles inside Iraq.³³

Iran’s Proxy Warfare. Iran has adopted a political warfare strategy that emphasizes irregular warfare, asymmetric tactics, and the extensive use of proxy forces. The Islamic Revolutionary Guard Corps has trained, armed, supported, and collaborated with a wide variety of radical Shia and Sunni militant

groups, as well as Arab, Palestinian, Kurdish, and Afghan groups that do not share its radical Islamist ideology. The IRGC’s elite Quds (Jerusalem) Force has cultivated, trained, armed, and supported numerous proxies, particularly the Lebanon-based Hezbollah; Iraqi Shia militant groups; Palestinian groups such as Hamas and Palestinian Islamic Jihad; and insurgent groups that have fought against the governments of Afghanistan, Bahrain, Egypt, Israel, Iraq, Jordan, Kuwait, Morocco, Saudi Arabia, Turkey, the United Arab Emirates (UAE), and Yemen.

Iran is the world’s foremost state sponsor of terrorism and has made extensive efforts to export its radical Shia brand of Islamist revolution. It has established a network of powerful Shia revolutionary groups in Lebanon and Iraq; has cultivated links with Afghan Shia and Taliban militants; and has stirred Shia unrest in Bahrain, Iraq, Lebanon, Saudi Arabia, and Yemen. In recent years, Iranian arms shipments have been intercepted regularly by naval forces off the coasts of Bahrain and Yemen, and Israel has repeatedly intercepted Iranian arms shipments, including long-range rockets, bound for Palestinian militants in Gaza.

U.S. troops in the Middle East have been targeted by Iranian proxies in Lebanon in the 1980s, Saudi Arabia in 1996, and Iraq in the 2000s. In April 2019, the Pentagon released an updated estimate of the number of U.S. personnel killed by Iran-backed militias in Iraq, revising the number upward to at least 603 dead between 2003 and 2011. These casualties, about 17 percent of the American death toll in Iraq, “were the result of explosively formed penetrators (EFP), other improvised explosive devices (IED), improvised rocket-assisted munitions (IRAM), rockets, mortars, rocket-propelled grenades (RPG), small-arms, sniper, and other attacks in Iraq,” according to a Pentagon spokesman.³⁴

In 2019, Tehran ratcheted up surrogate attacks in Iraq against U.S. troops as part of its aggressive campaign to push back against the U.S. “maximum pressure” sanctions campaign and block the negotiation of a revised nuclear

agreement with tighter restrictions. After scores of rocket attacks on Iraqi military bases that hosted U.S. personnel, Iran-controlled Shia militias succeeded in killing an American contractor on December 27, 2019. The ensuing crisis quickly escalated. The U.S. launched air strikes against the Kataib Hezbollah militia that launched the attack; pro-Iranian militia members retaliated by trying to burn down the U.S. embassy in Baghdad; and Washington responded on January 2, 2020, with a drone strike that killed General Qassem Soleimani, leader of the IRGC Quds Force, which was orchestrating the attacks. Iran responded with additional proxy attacks and a ballistic missile attack that failed to kill any U.S. troops stationed at Iraqi military bases.³⁵

After a February 15, 2021, rocket attack on an airport in Erbil, Iraq, killed a U.S. contractor, the U.S. retaliated with air strikes against seven targets inside Syria that were controlled by two Iran-backed Iraqi militias, Kataib Hezbollah and Kataib Sayyid al-Shuhada, that were found to have been responsible for the Erbil attack.³⁶ Attacks by Iran-backed militias have continued in Iraq, including UAV strikes that pose a growing threat to the 2,500 U.S. troops that train and support Iraqi security forces.³⁷

Terrorist Threats from Hezbollah. Hezbollah is a close ally of, frequent surrogate for, and terrorist subcontractor for Iran's revolutionary Islamist regime. Iran played a crucial role in creating Hezbollah in 1982 as a vehicle for exporting its revolution, mobilizing Lebanese Shia, and developing a terrorist surrogate for attacks on its enemies.

Tehran provides the lion's share of Hezbollah's foreign support: arms, training, logistical support, and money. The Pentagon has estimated that Iran provides up to \$200 million in annual financial support for Hezbollah; other estimates made before the 2015 Joint Comprehensive Plan of Action (JCPOA), commonly known as the Iran nuclear deal, ran as high as \$350 million annually.³⁸ After the nuclear deal, which offered Tehran substantial relief from sanctions, Tehran increased its aid to Hezbollah, providing as much as \$800 million

per year according to Israeli officials.³⁹ Tehran has been lavish in stocking Hezbollah's expensive and extensive arsenal of rockets, sophisticated land mines, small arms, ammunition, explosives, anti-ship missiles, anti-aircraft missiles, and even UAVs that Hezbollah can use for aerial surveillance or remotely piloted terrorist attacks. Iranian Revolutionary Guards have trained Hezbollah terrorists in Lebanon's Bekaa Valley and in Iran.

Iran has used Hezbollah as a club to hit not only Israel and Tehran's Western enemies, but many Arab countries as well. Tehran's revolutionary ideology has fueled Iran's hostility to other Middle Eastern governments, many of which it seeks to overthrow and replace with radical allies. During the Iran-Iraq war, Iran used Hezbollah to launch terrorist attacks against Iraqi targets and against Arab states that sided with Iraq. Hezbollah launched numerous terrorist attacks against Saudi Arabia and Kuwait, which extended strong financial support to Iraq's war effort, and participated in several other terrorist operations in Bahrain and the UAE.

Iranian Revolutionary Guards conspired with the Saudi Arabian branch of Hezbollah to conduct the 1996 Khobar Towers bombing that killed 19 American military personnel. Hezbollah collaborated with the IRGC's Quds Force to destabilize Iraq after the 2003 U.S. occupation and helped to train and advise the Mahdi Army, the radical anti-Western Shiite militia led by militant Iraqi cleric Moqtada al-Sadr. Hezbollah detachments also have cooperated with IRGC forces in Yemen to train and assist the Houthi rebel movement.

Hezbollah threatens the security and stability of the Middle East and Western interests in the Middle East on a number of fronts. In addition to its murderous actions against Israel, Hezbollah has used violence to impose its radical Islamist agenda and subvert democracy in Lebanon. Some experts believed that Hezbollah's participation in the 1992 Lebanese elections and subsequent inclusion in Lebanon's parliament and coalition governments would moderate its behavior, but political inclusion did not lead it to renounce terrorism.

Iranian Missile Systems: Maximum Ranges



- 2,000 km**
Shahab 3/Emad-1/Sejjil MRBMs
- 750 km**
Qiam-1 SRBM
- 700 km**
Zolfaghar SRBM
- 500 km**
Shahab 2 SRBM and Fateh-110
- 300 km**
Shahab 1

SOURCE: U.S. Department of Defense, Defense Intelligence Agency, *Iran Military Power: Ensuring Regime Survival and Securing Military Dominance*, 2019, p. 43, https://www.dia.mil/Portals/27/Documents/News/Military%20Power%20Publications/Iran_Military_Power_LR.pdf (accessed July 23, 2021).

Hezbollah also poses a potential threat to America's NATO allies in Europe. It established a presence inside European countries in the 1980s amid the influx of Lebanese citizens who were seeking to escape Lebanon's civil war and took root among Lebanese Shiite immigrant communities throughout Europe. German intelligence officials have estimated that about 1,250 Hezbollah members and supporters were living in Germany in 2020.⁴⁰ Hezbollah also has developed an extensive web of fundraising and logistical support cells throughout Europe.⁴¹

France and Britain have been the principal European targets of Hezbollah terrorism, partly because both countries opposed Hezbollah's agenda in Lebanon and were perceived as enemies of Iran, Hezbollah's chief patron. Hezbollah has been involved in many terrorist attacks against Europeans, including:

- The October 1983 bombing of the French contingent of the multinational peacekeeping force in Lebanon, which killed 58 French soldiers on the same day that the U.S. Marine barracks was bombed;
- The December 1983 bombing of the French embassy in Kuwait;
- The April 1985 bombing of a restaurant near a U.S. base in Madrid, Spain, which killed 18 Spanish citizens;
- A campaign of 13 bombings in France in 1986 that targeted shopping centers and railroad facilities, killing 13 people and wounding more than 250; and
- A March 1989 attempt to assassinate British novelist Salman Rushdie that failed when a bomb exploded prematurely, killing a terrorist in London.

Hezbollah's attacks in Europe trailed off in the 1990s after the group's Iranian sponsors accepted a truce in their bloody 1980–1988 war with Iraq and no longer needed a

surrogate to punish states that Tehran perceived as supporting Iraq. Significantly, if Hezbollah decided to revive its aggressive operations in southern Lebanon, European participation in Lebanese peacekeeping operations, which became a lightning rod for Hezbollah terrorist attacks in the 1980s, could again become an issue. Troops from European Union (EU) member states could someday find themselves attacked by Hezbollah with weapons financed by Hezbollah supporters in their home countries.

Hezbollah operatives have been deployed in countries throughout Europe, including Belgium, Bulgaria, Cyprus, France, Germany, and Greece.⁴² On April 30, 2020, Germany designated Hezbollah as a terrorist organization after Israel provided intelligence on a Hezbollah stockpile of ammonium nitrate intended to make explosives that were stored in a German warehouse.

Mounting Missile Threat. Iran possesses the largest number of deployed missiles in the Middle East.⁴³ Testifying before the House Armed Services Committee in March 2020, the commander of CENTCOM, Marine Corps General Kenneth McKenzie, estimated that Iran has “about 2500 to 3000 ballistic missiles.”⁴⁴ In June 2017, Iran launched mid-range missiles from its territory against opposition targets in Syria. This was Iran's first such operational use of mid-range missiles in almost 30 years, but it was not as successful as Tehran might have hoped. It was reported that three of the five missiles launched missed Syria altogether and landed in Iraq and that the remaining two landed in Syria but missed their intended targets by miles.⁴⁵

Iran launched a much more successful attack on September 14, 2019, using at least 18 UAVs and three low-flying cruise missiles to destroy parts of the Saudi oil processing facility at Abqaiq and the oil fields at Khurais. The precisely targeted attack shut down half of Saudi Arabia's oil production, which is approximately equivalent to 5 percent of global oil production. Although Iran denied responsibility, U.S. intelligence sources identified the launch site as the

Ahvaz air base in southwest Iran about 650 kilometers north of Abqaiq.⁴⁶

Iran also used ballistic missiles to attack two Iraqi bases hosting U.S. military personnel on January 8, 2020, in retaliation for an earlier U.S. strike that killed IRGC Quds Force commander General Qassem Soleimani. Of the 16 short-range ballistic missiles launched from three bases inside Iran, 12 reached their targets: 11 struck al-Asad air base in western Iraq, and one struck a base near the northern Iraqi city of Irbil.⁴⁷ No U.S. personnel were killed, but more than 100 were later treated for traumatic brain injuries.

The backbone of the Iranian ballistic missile force is the Shahab series of road-mobile surface-to-surface missiles. Based on Soviet-designed Scud missiles, the Shahabs are potentially capable of carrying nuclear, chemical, or biological warheads in addition to conventional high-explosive warheads. Their relative inaccuracy (compared to NATO ballistic missiles) limits their effectiveness unless they are employed against large soft targets like cities.

Tehran's heavy investment in such weapons has fueled speculation that the Iranians intend eventually to replace the conventional warheads on their longer-range missiles with nuclear warheads. As the Nuclear Threat Initiative has observed, "Iran's rapidly improving missile capabilities have prompted concern from international actors such as the United Nations, the United States and Iran's regional neighbors."⁴⁸

Iran is not a member of the Missile Technology Control Regime. Instead, it has sought aggressively to acquire, develop, and deploy a wide spectrum of ballistic missile, cruise missile, and space launch capabilities. During the 1980–1988 Iran–Iraq war, Iran acquired Soviet-made Scud-B missiles from Libya and later acquired North Korean–designed Scud-C and No-dong missiles, which it renamed the Shahab-2 (with an estimated range of 500 kilometers or 310 miles) and Shahab-3 (with an estimated range of 900 kilometers or 560 miles). It now can produce its own variants of these missiles as well as longer-range Ghadr-1 and Qiam missiles.⁴⁹

Iran's Shahab-3 and Ghadr-1, which is a modified version of the Shahab-3 with a smaller warhead but greater range (about 1,600 kilometers or 1,000 miles), are considered more reliable and advanced than the North Korean No-dong missile from which they are derived. Although early variants of the Shahab-3 missile were relatively inaccurate, Tehran was able to adapt and employ Chinese guidance technology to improve strike accuracy significantly.⁵⁰ In 2014, then-Defense Intelligence Agency Director Lieutenant General Michael T. Flynn warned that:

Iran can strike targets throughout the region and into Eastern Europe. In addition to its growing missile and rocket inventories, Iran is seeking to enhance [the] lethality and effectiveness of existing systems with improvements in accuracy and warhead designs. Iran is developing the Khalij Fars, an anti-ship ballistic missile which could threaten maritime activity throughout the Persian Gulf and Strait of Hormuz.⁵¹

Iran's ballistic missiles threaten U.S. bases and allies from Turkey, Israel, and Egypt to the west to Saudi Arabia and the other Gulf States to the south and Afghanistan and Pakistan to the east. Iran also has become a center for missile proliferation by exporting a wide variety of ballistic missiles, cruise missiles, and rockets to the Assad regime in Syria and such proxy groups as Hezbollah, Hamas, Palestinian Islamic Jihad, the Houthi rebels in Yemen, and Iraqi militias. The Houthi Ansar Allah group has launched Iranian-supplied ballistic missiles and armed drones against targets in Saudi Arabia and the UAE, which launched a military campaign against them in 2015 in support of Yemen's government.

However, it is Israel, which has fought a shadow war with Iran and its terrorist proxies, that is most at risk from an Iranian missile attack. In case the Israeli government had any doubt about Iran's implacable hostility, the Revolutionary Guards, which control most of

Iran's strategic missile systems, displayed a message written in Hebrew on the side of one of the Iranian missiles tested in March 2016: "Israel must be wiped off the earth."⁵² The development of nuclear warheads for Iran's ballistic missiles would significantly degrade Israel's ability to deter major Iranian attacks, an ability that the existing (but not officially acknowledged) Israeli monopoly on nuclear weapons in the Middle East currently provides.

For Iran's radical regime, hostility to Israel, which Iran sometimes calls the "Little Satan," is second only to hostility to the United States, which the leader of Iran's 1979 revolution, Ayatollah Khomeini, dubbed the "Great Satan." However, Iran poses a greater immediate threat to Israel than it does to the United States: Israel is a smaller country with fewer military capabilities, is located much closer to Iran, and already is within range of Iran's Shahab-3 missiles. Moreover, all of Israel can be hit with the thousands of shorter-range rockets that Iran has provided to Hezbollah in Lebanon and to Hamas and Palestinian Islamic Jihad in Gaza. In April 2021, Hamas and Palestinian Islamic Jihad launched more than 4,000 rockets and missiles in an 11-day mini-war with Israel.⁵³

Weapons of Mass Destruction. Tehran has invested tens of billions of dollars since the 1980s in a nuclear weapons program that it sought to conceal within its civilian nuclear power program. It built clandestine but subsequently discovered underground uranium enrichment facilities near Natanz and Fordow and a heavy-water reactor near Arak that would generate plutonium to give it a second potential route to nuclear weapons.⁵⁴

Before the 2015 nuclear deal, Iran had accumulated enough low-enriched uranium to build eight nuclear bombs (assuming that the uranium was enriched to weapon-grade levels). In November 2015, the Wisconsin Project on Nuclear Arms Control reported that "[b]y using the approximately 9,000 first generation centrifuges operating at its Natanz Fuel Enrichment Plant as of October 2015, Iran could theoretically produce enough weapon-grade

uranium to fuel a single nuclear warhead in less than 2 months."⁵⁵ Clearly, the development of a nuclear bomb would greatly amplify the threat posed by Iran. Even if Iran did not use a nuclear weapon or pass it on to one of its terrorist surrogates to use, the regime could become emboldened to expand its support for terrorism, subversion, and intimidation, assuming that its nuclear arsenal would protect it from retaliation as has been the case with North Korea.

On July 14, 2015, President Barack Obama announced that the United States and Iran, along with China, France, Germany, Russia, the United Kingdom, and the EU High Representative for Foreign Affairs and Security Policy, had reached "a comprehensive, long-term deal with Iran that will prevent it from obtaining a nuclear weapon."⁵⁶ The short-lived agreement, however, did a much better job of dismantling sanctions against Iran than it did of dismantling Iran's nuclear infrastructure, much of which was allowed to remain functional subject to weak restrictions, some of them only temporary. This flaw led President Donald Trump to withdraw the U.S. from the agreement on May 8, 2018, and reimpose sanctions.⁵⁷

In fact, the agreement did not specify that any of Iran's covertly built facilities would have to be dismantled. The Natanz and Fordow uranium enrichment facilities were allowed to remain in operation, although the latter facility was to be repurposed at least temporarily as a research site. The heavy-water reactor at Arak was also retained with modifications that would reduce its yield of plutonium. All of these facilities, built covertly and housing operations prohibited by multiple U.N. Security Council resolutions, were legitimized by the agreement.

The Iran nuclear agreement marked a risky departure from more than five decades of U.S. nonproliferation efforts under which Washington opposed the spread of sensitive nuclear technologies, such as uranium enrichment, even for allies. Iran got a better deal on uranium enrichment under the agreement than such U.S. allies as the United Arab Emirates,

South Korea, and Taiwan have received from Washington in the past. In fact, the Obama Administration gave Iran better terms on uranium enrichment than President Gerald Ford's Administration gave the Shah of Iran, a close U.S. ally before the 1979 revolution, who was denied independent reprocessing capabilities.

President Trump's decision to withdraw from the nuclear agreement marked a return to long-standing U.S. nonproliferation policy. Iran, Britain, France, Germany, the EU, China, and Russia sought to salvage the agreement but were unable to offset the strength of U.S. nuclear sanctions that were fully reimposed by November 4, 2018, after a 180-day wind-down period.

Iran initially adopted a policy of "strategic patience," seeking to preserve as much of the agreement's relief from sanctions as it could while hoping to outlast the Trump Administration and deal with a presumably more pliable successor Administration after the 2020 elections. The Trump Administration, however, ratcheted up sanctions to unprecedented levels under its "maximum pressure" campaign. On April 8, 2019, it designated Iran's Revolutionary Guards as a foreign terrorist organization. Because the Revolutionary Guards are extensively involved in Iran's oil, construction, and defense industries, this allowed U.S. sanctions to hit harder at strategic sectors of Iran's economy.⁵⁸ On April 22, 2019, Secretary of State Mike Pompeo announced that the Administration would eliminate waivers for Iran's remaining oil exports on May 2 and seek to zero them out entirely.⁵⁹

Although President Trump made it clear that he sought a new agreement on Iran's nuclear program, Tehran refused to return to the negotiating table. Instead, it sought to pressure European states into protecting it from the effects of U.S. sanctions.

On May 8, 2019, Iranian President Rouhani announced that Iran would no longer comply with the 2015 nuclear agreement's restrictions on the size of Iran's stockpiles of enriched uranium and heavy water.⁶⁰ Tehran gave the Europeans 60 days to deliver greater sanctions

relief, specifically with respect to oil sales and banking transactions, and warned that if the terms of its ultimatum were not met by July 7, 2019, it would incrementally violate the restrictions set by the JCPOA. Since then, Iran has escalated its noncompliance with the agreement in a series of major violations that include breaching the caps on uranium enrichment, research and development of advanced centrifuges, numbers of operating centrifuges, and resuming enrichment at the fortified Fordow facility. When announcing the fifth breach in January 2020, Iran stated that its uranium enrichment program no longer faced any restrictions.⁶¹

By late February 2020, Iran had accumulated about 1,510 kilograms of low-enriched uranium—enough to give it a breakout estimate (the time needed to produce enough weapon-grade uranium for one nuclear weapon) of "3.8 months, with a range of 3.1 to 4.6 months."⁶² By February 16, 2021, Iran had accumulated about 4,390 kilograms of low-enriched uranium and had reduced its estimated breakout time to as little as 2.7 months, with enough enriched uranium to arm three nuclear weapons within six months if it continued to enrich to higher levels.⁶³ This worst-case estimate of how long it would take Tehran to acquire the enriched uranium necessary for a nuclear weapon at its known nuclear facilities is likely to shrink further as Iran adds new centrifuges and expands its stockpile of enriched uranium.

On April 11, 2021, Iran's uranium enrichment efforts were disrupted by an explosion that cut power and damaged centrifuges at the underground Natanz enrichment facility. Tehran blamed the explosion and damage on Israeli sabotage.⁶⁴ Iran announced it would raise enrichment levels to 60 percent, much closer to the 90 percent enrichment level required for a nuclear weapon, in retaliation for the loss of centrifuge capacity.

The future of Iran's nuclear program is being negotiated at indirect talks between Iran and the United States hosted by the European Union in Vienna, Austria.

Iran also is a declared chemical weapons power that claims to have destroyed all of its stockpiles of chemical weapons, but it has never fully complied with the Chemical Weapons Convention or declared its holdings.⁶⁵ U.S. intelligence agencies have assessed that Iran maintains “the capability to produce chemical warfare (CW) agents and ‘probably’ has the capability to produce some biological warfare agents for offensive purposes, if it made the decision to do so.”⁶⁶

Iranian Threats to Israel. In addition to ballistic missile threats from Iran, Israel faces the constant threat of attack from Palestinian, Lebanese, Egyptian, Syrian, and other Arab terrorist groups, including many that are supported by Iran. The threat posed by Arab states, which lost four wars against Israel in 1948, 1956, 1967, and 1973 (Syria and the PLO lost a fifth war in 1982 in Lebanon), has gradually declined. Egypt and Jordan have signed peace treaties with Israel, and Iraq, Libya, Syria, and Yemen have been distracted by civil wars. At the same time, however, unconventional military and terrorist threats, especially from an expanding number of sub-state actors, have risen substantially.

Iran has systematically bolstered many of these groups, including some whose ideology it does not necessarily share. Today, for example, Iran’s surrogates Hezbollah and Palestinian Islamic Jihad, along with more distantly Hamas, pose the chief immediate security threats to Israel. After Israel’s May 2000 withdrawal from southern Lebanon and the September 2000 outbreak of fighting between Israelis and Palestinians, Hezbollah stepped up its support for such Palestinian extremist groups as Hamas, Palestinian Islamic Jihad, the al-Aqsa Martyrs’ Brigades, and the Popular Front for the Liberation of Palestine. It also expanded its own operations in the West Bank and Gaza and provided funding for specific attacks launched by other groups.

In July 2006, Hezbollah forces crossed the Lebanese border in an effort to kidnap Israeli soldiers inside Israel, igniting a military clash that claimed hundreds of lives and severely

damaged the economies on both sides of the border. Hezbollah has since rebuilt its depleted arsenal with help from Iran and Syria. Hezbollah has amassed at least 130,000 rockets and missiles—more than all of the European members of NATO combined.⁶⁷ Some of the most dangerous are long-range Iranian-made missiles capable of striking cities throughout Israel.⁶⁸ In recent years, under cover of the war in Syria, Iran has provided Hezbollah with increasingly sophisticated, accurate, and longer-range weapons as well as guidance kits that upgrade the accuracy of older rockets.⁶⁹ Iran and Hezbollah also have established another potential front against Israel in Syria.

Since Israel’s withdrawal from the Gaza Strip in 2005, Hamas, Palestinian Islamic Jihad, and other terrorist groups have fired more than 11,000 rockets into Israel during brief wars in 2008–2009, 2012, and 2014.⁷⁰ Over 5 million Israelis out of a total population of 8.1 million live within range of rocket attacks from Gaza, although the successful operation of the Iron Dome anti-missile system has greatly mitigated this threat in recent years. In the 2014 Gaza war, Hamas also unveiled a sophisticated tunnel network that it used to infiltrate Israel so that it could launch attacks on Israeli civilians and military personnel. In early May 2019, Palestinian Islamic Jihad ignited another round of fighting in Gaza in which about 700 rockets were fired at Israel.⁷¹ In May 2021, Hamas and Palestinian Islamic Jihad launched another 11-day war against Israel during which they launched about 4,300 rockets at Israel, killing 12 Israelis while suffering over 240 Palestinian deaths, including roughly 200 militants, according to Israel.⁷² Gaza remains a flash point that could trigger another conflict with little warning.

Threats to Saudi Arabia and Other Members of the Gulf Cooperation Council. Saudi Arabia and the five other Arab Gulf States—Bahrain, Kuwait, Oman, Qatar, and the United Arab Emirates—formed the Gulf Cooperation Council (GCC) in 1981 to deter and defend against Iranian aggression. Iran remains the primary external threat to their security.

Tehran has supported groups that launched terrorist attacks against Bahrain, Iraq, Kuwait, Saudi Arabia, and Yemen. It sponsored the Islamic Front for the Liberation of Bahrain, a surrogate group that plotted a failed 1981 coup against Bahrain's ruling Al Khalifa family, the Sunni rulers of the predominantly Shia country. Iran also has long backed Bahraini branches of Hezbollah and the Dawa Party.

When Bahrain was engulfed in a wave of Arab Spring protests in 2011, its government charged that Iran again exploited the protests to back the efforts of Shia radicals to overthrow the royal family. Saudi Arabia, fearing that a Shia revolution in Bahrain would incite its own restive Shia minority, led a March 2011 GCC intervention that backed Bahrain's government with about 1,000 Saudi troops and 500 police from the UAE.

Bahrain has repeatedly intercepted shipments of Iranian arms, including sophisticated bombs employing explosively formed penetrators. The government withdrew its ambassador to Tehran when two Bahrainis with ties to the IRGC were arrested after their arms shipment was intercepted off Bahrain's coast in July 2015.

Iranian hard-liners have steadily escalated pressure on Bahrain. In March 2016, a former IRGC general who is a close adviser to Ayatollah Khamenei stated that "Bahrain is a province of Iran that should be annexed to the Islamic Republic of Iran."⁷³ After Bahrain stripped a senior Shiite cleric, Sheikh Isa Qassim, of his citizenship, General Qassem Soleimani, commander of the IRGC's Quds Force, threatened to make Bahrain's royal family "pay the price and disappear."⁷⁴

Saudi Arabia has criticized Iran for supporting radical Saudi Shiites, intervening in Syria, and supporting Shiite Islamists in Lebanon, Iraq, and Yemen. In January 2016, Saudi Arabia executed a Shiite cleric charged with sparking anti-government protests and cut diplomatic ties with Iran after Iranian mobs responded to the execution by attacking and setting fire to the Saudi embassy in Tehran.⁷⁵

In addition to military threats from Iran, Saudi Arabia and the other GCC states face

terrorist threats and possible rebellions by Shia or other disaffected internal groups supported by Tehran. Iran has backed Shiite terrorist groups against Saudi Arabia, Bahrain, Iraq, and Kuwait and has supported the Shiite Houthi rebels in Yemen. In March 2015, Saudi Arabia led a 10-country coalition that launched a military campaign against Houthi forces and provided support for ousted Yemeni President Abdu Rabu Mansour Hadi, who took refuge in Saudi Arabia. The Saudi Navy also established a blockade of Yemeni ports to prevent Iran from aiding the rebels.

The Houthis have retaliated by launching Iranian-supplied missiles at military and civilian targets in Saudi Arabia and the UAE, including ballistic missile attacks on airports, Riyadh, and other cities as well as cruise missile strikes. In December 2017, the Houthis launched a cruise missile attack on an unfinished nuclear reactor in Abu Dhabi.

The Houthis also have made extensive use of UAVs and UCAVs (unmanned combat aerial vehicles, or armed drones). A Houthi UCAV attacked a military parade in Yemen in January 2019, killing at least six people including Yemen's commander of military intelligence, and longer-range UCAVs were used in a coordinated attack on Saudi Arabia's East-West pipeline on May 14, 2019.⁷⁶ The Houthis have employed Iranian Sammad-2 and Sammad-3 UCAVs in strikes against Riyadh, Abu Dhabi International Airport in the UAE, and other targets.⁷⁷

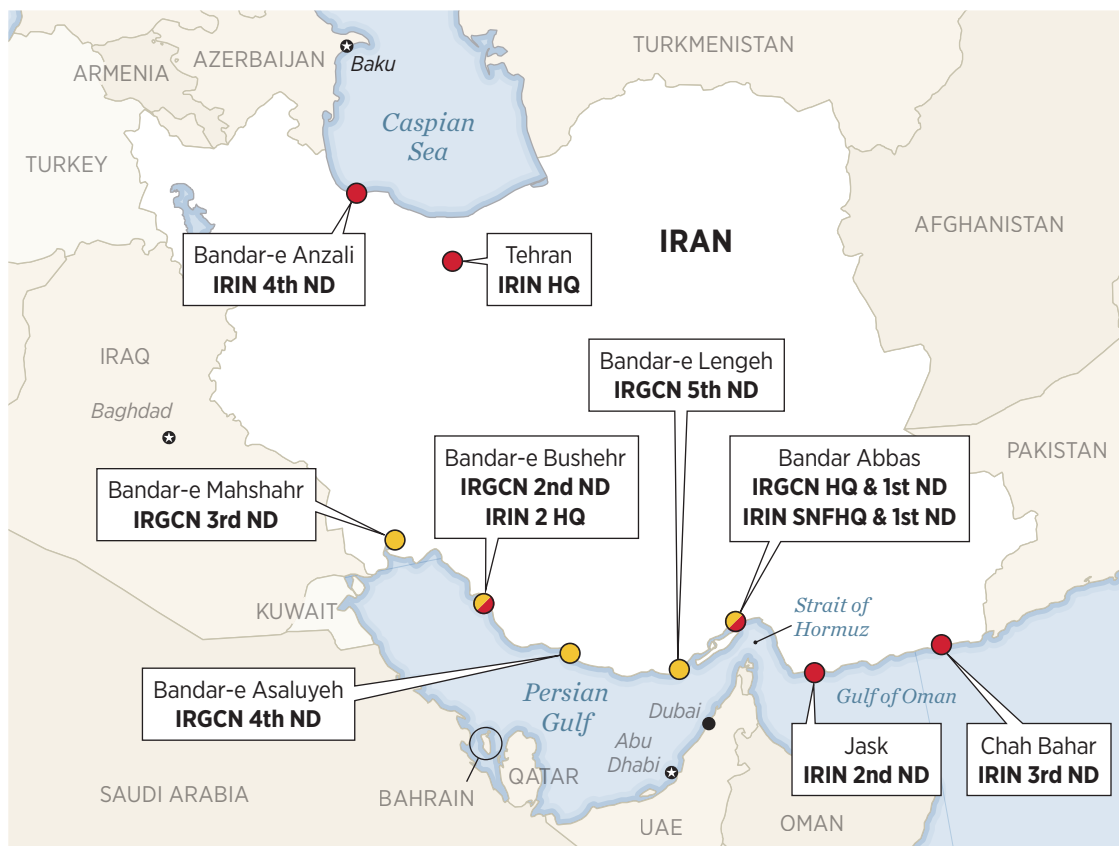
Threats to the Commons

The United States has critical interests at stake in the Middle Eastern commons: sea, air, space, and cyber. The U.S. has long provided the security backbone in these areas, and this security has supported the region's economic development and political stability.

Maritime. Maintaining the security of the sea lines of communication in the Persian Gulf, Arabian Sea, Red Sea, and Mediterranean Sea is a high priority for strategic, economic, and energy security purposes. In 2019, the Persian Gulf region produced about 31 percent of the world's crude oil and held about 48 percent of

Iranian Naval Headquarters

● Islamic Republic of Iran Navy Headquarters ● Islamic Revolutionary Guard Corps Navy Headquarters



ND — Naval district

SOURCE: U.S. Department of Defense, Defense Intelligence Agency, *Iran Military Power: Ensuring Regime Survival and Securing Military Dominance*, 2019, p. 48, https://www.dia.mil/Portals/27/Documents/News/Military%20Power%20Publications/Iran_Military_Power_LR.pdf (accessed July 23, 2021).

heritage.org

global proved crude oil reserves.⁷⁸ The Persian Gulf is a crucial source of oil and gas for energy-importing states, particularly China, India, Japan, South Korea, and many European countries. Interstate conflict or terrorist attacks could easily interrupt the flow of that oil.

Bottlenecks such as the Strait of Hormuz, Suez Canal, and Bab el-Mandeb Strait are potential choke points for restricting the flow of oil, international trade, and the deployment

of U.S. and allied naval forces. Although the United States has greatly reduced its dependence on oil exports from the Gulf, it still would sustain economic damage in the event of a spike in world oil prices, and many of its European and Asian allies and trading partners import a substantial portion of their oil needs from the region.

The world's most important maritime choke point and the jugular vein through

which most Gulf oil exports flow to Asia and Europe is the Strait of Hormuz. In 2018, the “daily oil flow [through the Strait of Hormuz] averaged 21 million barrels per day (b/d), or the equivalent of about 21% of global petroleum liquids consumption.”⁷⁹ The chief potential threat to the free passage of ships through the strait is Iran, whose Supreme Leader, Ayatollah Ali Khamenei, proclaimed in 2006 that “[i]f the Americans make a wrong move toward Iran, the shipment of energy will definitely face danger, and the Americans would not be able to protect energy supply in the region.”⁸⁰

Iranian officials often reiterate these threats during periods of heightened tension. For example, the chief of staff of Iran’s army, Major General Mohammad Baqeri, warned on April 28, 2019, that “if our oil does not pass, the oil of others shall not pass the Strait of Hormuz either.”⁸¹

Less than one month later, Iran began to intensify its intimidation tactics against international shipping near the strait. On May 12, 2019, four oil tankers were damaged by mysterious explosions off the coast of the UAE in the Gulf of Oman. Then-U.S. National Security Adviser John Bolton stated that “naval mines almost certainly from Iran” were the cause of the damage.⁸² On June 13, two more tankers were attacked in the Gulf of Oman. Even though Iranian Revolutionary Guards were filmed removing an unexploded limpet mine from one of the damaged ships, Tehran continued to deny its involvement in all of the attacks.⁸³ On June 19, an IRGC surface-to-air missile shot down a U.S. surveillance drone in international air space. The U.S. initially planned to launch retaliatory strikes, but President Trump called off the operation.⁸⁴ Iran continued its aggressive behavior, launching a sophisticated UCAV and cruise missile attack on Saudi oil facilities in September 2019.

In late 2019, Iranian-controlled Iraqi militias launched a series of rocket attacks on Iraqi bases containing U.S. troops, provoking U.S. retaliatory air strikes against those militias and the January 2020 UCAV strike that killed General Qassem Soleimani. Rocket attacks by Iraqi

militias have continued, and tensions remain high in Gulf waters.

On May 10, 2020, a missile launched from an Iranian Navy frigate struck another Iranian naval vessel during a military exercise in the Gulf of Oman, killing at least 19 sailors and wounding 15.⁸⁵ The incident raised questions about the competence and training of Iran’s naval forces. The June 2, 2021, sinking of the *Kharg*, Iran’s largest warship, raised similar questions. The *Kharg*, a naval replenishment ship, caught fire and sank in the Gulf of Oman during a training exercise.

However, while Iran’s military forces have suffered numerous accidents because of lax maintenance and safety practices, there also was speculation that the *Kharg* might have been sabotaged in a covert Israeli attack. Israel reportedly has attacked at least 12 Iranian vessels transporting oil, arms, and other cargo to Syria to prop up the Assad regime and bolster Hezbollah.⁸⁶ It also has been suspected of triggering the April 6, 2021, explosion that damaged the *Saviz*, a converted cargo ship permanently moored in the Red Sea near the coast of Yemen to collect intelligence and support Iran’s Houthi allies.⁸⁷ For its part, Iran is the leading suspect in two attacks on Israeli-owned cargo ships: one on February 25, 2021, in the Gulf of Oman and another on March 25, 2021, in the Arabian Sea.⁸⁸ Although its contours remain murky, it is clear that the Iran–Israel shadow war has expanded to include maritime attacks.

Iran has a long history of attacking oil shipments in the Gulf. During the Iran–Iraq war, each side targeted the other’s oil facilities, ports, and oil exports. Iran escalated attacks to include neutral Kuwaiti oil tankers and terminals and clandestinely laid mines in Persian Gulf shipping lanes while its ally Libya clandestinely laid mines in the Red Sea. The United States defeated Iran’s tactics by reflagging Kuwaiti oil tankers, clearing the mines, and escorting ships through the Persian Gulf, but a large number of commercial vessels were damaged during the “Tanker War” from 1984 to 1987.

Iran's demonstrated willingness to disrupt oil traffic through the Persian Gulf to pressure Iraq economically is a red flag to U.S. military planners. During the 1980s Tanker War, Iran's ability to strike at Gulf shipping was limited by its aging and outdated weapons systems and the arms embargo imposed by the U.S. after the 1979 revolution. Since the 1990s, however, Iran has been upgrading its military with new weapons from North Korea, China, and Russia, as well as with weapons manufactured domestically.

Since the Iran–Iraq war, Tehran has invested heavily in developing its naval forces, particularly the IRGC Navy, along unconventional lines. Today, Iran boasts an arsenal of Iranian-built missiles based on Russian and Chinese designs that represent significant threats to oil tankers as well as warships. Iran has deployed mobile anti-ship missile batteries along its 1,500-mile Gulf coast and on many of the 17 Iranian-controlled islands in the Gulf in addition to modern anti-ship missiles mounted on fast attack boats, submarines, oil platforms, and vessels disguised as civilian fishing boats. Six of Iran's 17 islands in the Gulf—Forur, Bani Forur, Sirri, and three islands seized from the UAE: Abu Musa, Greater Tunb, and Lesser Tunb—are particularly important because they are located close to the shipping channels that all ships must use near the Strait of Hormuz.

Iran has imported Russian submarines, North Korean minisubmarines, and a wide variety of advanced Chinese anti-ship missiles. It also has a significant stock of Chinese-designed anti-ship cruise missiles, including the older HY-2 Seersucker and the more modern CSS-N-4 Sardine and CSS-N-8 Saccade models, and has reverse engineered Chinese missiles to produce its own Ra'ad and Noor anti-ship cruise missiles. More recently, Tehran has produced and deployed more advanced anti-ship cruise missiles, the Nasir and Qadir.⁸⁹ Shore-based missiles deployed along Iran's coast would be augmented by aircraft-delivered laser-guided bombs and missiles as well as by television-guided bombs.

Iran has a large supply of anti-ship mines, including modern mines that are far superior

to the simple World War I–style contact mines that it used in the 1980s. In addition to expanding the quantity of its mines from an estimated 1,500 during the Iran–Iraq war to more than 5,000 in 2019, Tehran has increased their quality.⁹⁰ It has acquired significant stocks of “smart mines” including versions of the Russian MDM-6, Chinese MC-52, and Chinese EM-11, EM-31, and EM-55 mines.⁹¹ One of Iran's most lethal mines is the Chinese-designed EM-52 “rocket” mine, which remains stationary on the sea floor and fires a homing rocket when a ship passes overhead.

Iran can deploy mines or torpedoes from its three *Kilo*-class submarines, purchased from Russia and based at Bandar Abbas, Iran's largest seaport and naval base. These submarines could be difficult to detect for brief periods when running silent and remaining stationary on a shallow bottom just outside the Strait of Hormuz.⁹² Iran also could use minisubmarines, helicopters, or small boats disguised as fishing vessels to deploy its mines. Iran's robust mine warfare capability and the U.S. and allied navies' limited capacity for countermine operations are major challenges to Gulf maritime security.⁹³

Iran has developed two separate naval forces. The regular navy takes the lead in the Caspian Sea and outside the Strait of Hormuz in the Gulf of Oman, and the Islamic Revolutionary Guard Corps Navy is Iran's dominant force inside the Persian Gulf. The IRGC Navy has developed an effective asymmetric naval warfare strategy that could enable it to counter the superior firepower and technology of the U.S. Navy and its GCC allies, at least for a short period. It has adopted swarming tactics using well-armed fast attack boats to launch surprise attacks against larger and more heavily armed naval adversaries.

The commander of the IRGC Navy bragged in 2008 that it had brought guerilla warfare tactics to naval warfare: “We are everywhere and at the same time nowhere.”⁹⁴ The IRGC has honed such unconventional tactics as deploying remote-controlled radar decoy boats and boats packed with explosives to confuse defenses and attack adversaries. It also could

deploy naval commandos trained to attack using small boats, minisubmarines, and even Jet Skis as well as underwater demolition teams that could attack offshore oil platforms, moored ships, ports, and other facilities.

On April 28, 2015, the Revolutionary Guard naval force seized the *Maersk Tigris*, a container ship registered in the Marshall Islands near the Strait of Hormuz. Tehran claimed that it seized the ship because of a previous court ruling ordering the Maersk Line, which charters the ship, to make a payment to settle a dispute with a private Iranian company. The ship was later released after being held for more than a week.⁹⁵ Then, on May 14, 2015, the *Alpine Eternity*, a Singapore-flagged oil tanker, was surrounded and attacked by Revolutionary Guard gunboats in the Strait of Hormuz when it refused to be boarded. Iranian authorities alleged that it had damaged an Iranian oil platform in March, but the ship's owners maintained that it had hit an uncharted submerged structure.⁹⁶

The Revolutionary Guard's aggressive tactics in using commercial disputes as pretexts for illegal seizures of transiting vessels prompted the U.S. Navy to escort American and British-flagged ships through the Strait of Hormuz for several weeks in May before tensions eased.

The July 2015 nuclear agreement did not alter the Revolutionary Guard's confrontational tactics in the Gulf.⁹⁷ IRGC naval forces challenged U.S. naval forces in a series of incidents. IRGC missile boats launched rockets within 1,500 yards of the carrier *Harry S. Truman* near the Strait of Hormuz in late December 2015, flew drones over U.S. warships, and detained and humiliated 10 American sailors in a provocative January 12, 2016, incident.⁹⁸ Even though the two U.S. Navy boats carrying the sailors had drifted inadvertently into Iranian territorial waters, the vessels had the right of innocent passage, and their crews should not have been disarmed, forced onto their knees, filmed, and exploited in propaganda videos.

In 2017, for unknown reasons, Iran temporarily halted the harassment of U.S. Navy

ships. According to U.S. Navy reports, Iran instigated 23 "unsafe and/or unprofessional" interactions with U.S. Navy ships in 2015, 35 in 2016, and 14 in the first eight months of 2017, with the last incident occurring on August 14, 2017.⁹⁹ The provocations resumed in April 2020 when 11 IRGC Navy gunboats harassed six U.S. Navy vessels conducting exercises in the international waters of the North Arabian Gulf.¹⁰⁰ One week later, President Trump warned that U.S. Navy forces were authorized to destroy any Iranian vessels that harassed them. Iran's naval harassment subsided, but resumed in April 2021, when the IRGC Navy staged two incidents, forcing U.S. naval vessels to take evasive action in one and fire warning shots in the second.¹⁰¹

Iran has been accused of spoofing satellite navigation systems to lure foreign ships into its territorial waters so that it can seize them. This may have occurred in 2016 when 10 U.S. sailors were captured near an Iranian island and in 2019 when the *Stena Impero* tanker was seized in the Strait of Hormuz.¹⁰² Iran also may have used a similar technique to divert a U.S. UAV from Afghan airspace to Iran, where it was captured and put on display in 2011.

If Tehran were to attack ships transiting the Strait of Hormuz, the United States and its allies have the capacity to counter Iran's maritime threats and restore the flow of oil exports, but "the effort would likely take some time—days, weeks, or perhaps months—particularly if a large number of Iranian mines need to be cleared from the Gulf."¹⁰³ Naval warfare experts estimated in May 2019 that by using its combined coastal missile batteries, mines, submarines, and naval forces, Iran could close the strait for up to four weeks.¹⁰⁴ Such an aggressive move would be very costly and risky for Tehran. Closing the strait would also block Iran's oil exports and many of its imports, including imports of food and medicine. Moreover, most of Iran's naval forces, naval bases, and other military assets could be destroyed in the resulting conflict.

In addition to using its own forces, Tehran could use its extensive network of clients in

the region to sabotage oil pipelines and other infrastructure or to strike oil tankers in port or at sea. Iranian Revolutionary Guards deployed in Yemen reportedly played a role in the unsuccessful October 9 and 12, 2016, missile attacks launched by Houthi rebels against the USS *Mason*, a U.S. Navy warship, near the Bab el-Mandeb Strait in the Red Sea.¹⁰⁵ The Houthis denied that they launched the missiles, but they did claim responsibility for an October 1, 2016, attack on a UAE naval vessel and the suicide boat bombing of a Saudi warship in February 2017.

Houthi irregular forces have deployed mines along Yemen's coast, used a remote-controlled boat packed with explosives in an unsuccessful attack on the Yemeni port of Mokha in July 2017, and have launched several unsuccessful naval attacks against ships in the Red Sea. Houthi gunboats also attacked and damaged a Saudi oil tanker near the port of Hodeidah on April 3, 2018.

U.N. investigators have concluded that the Houthis also operate UAVs with a range of up to 1,500 kilometers (930 miles), several of which were used to attack Saudi Arabia's East-West pipeline on May 14, 2019.¹⁰⁶ This attack, along with attacks on oil tankers in the Gulf of Oman two days earlier, likely was a signal from Tehran that it can also disrupt oil shipments outside the Persian Gulf in a crisis. The Houthis have staged numerous UCAV attacks on Saudi targets along with a cruise missile attack on June 12, 2019, and an attack by 10 ballistic missiles on August 25.¹⁰⁷ The Houthis also claimed responsibility for the September 14, 2019, attacks on Saudi oil facilities at Abqaiq, but U.S. officials asserted that intelligence reports identified Iran as the staging ground for the attacks.¹⁰⁸ On March 7, 2021, the Houthis launched long-range UAVs and ballistic missiles provided by Iran at Saudi Arabia's Ras Tanura oil shipment facility, the largest in the world, driving oil prices up to over \$70 per barrel for the first time since the COVID-19 pandemic depressed the global economy.¹⁰⁹

Airspace. The Middle East is particularly vulnerable to attacks on civilian aircraft. Large

quantities of arms, including man-portable air defense systems, were looted from arms depots in Libya, Iraq, Syria, and Yemen during their civil wars and could find their way into the hands of Iranian-supported groups. Iran has provided anti-aircraft missiles to Hezbollah, Iraqi militias, and the Houthi rebels in Yemen. The Houthis also have attacked Saudi airports with ballistic missiles and armed drones, although they may have been targeting nearby military facilities.¹¹⁰

Perhaps the greatest Iranian threat to civil aviation would come in the event of a military clash in the crowded skies over the Persian Gulf. The U.S. Federal Aviation Administration issued a warning to commercial airlines on May 16, 2019, during a period of heightened tensions with Iran, explaining that civilian planes risked being targeted by the Iranian military as a result of "miscalculation or misidentification."¹¹¹

Tragically, this warning foreshadowed the January 8, 2020, shooting down of Ukraine International Airlines Flight 752 that killed 176 passengers and crew, most of them Iranians. Several hours earlier, Iran had launched a ballistic missile attack on Iraqi bases hosting U.S. troops, and Iranian officials later admitted that they had kept Tehran's airport open in the hope that the presence of passenger jets could act as a deterrent against an American attack on the airport or a nearby military base.¹¹²

Space. Iran has launched satellites into orbit, but there is no evidence that it has an offensive space capability. Tehran successfully launched three satellites in February 2009, June 2011, and February 2012 using the Safir space launch vehicle, which uses a modified Ghadr-1 missile for its first stage and has a second stage that is based on an obsolete Soviet submarine-launched ballistic missile, the R-27.¹¹³ The technology probably was transferred by North Korea, which built its BM-25 missiles using the R-27 as a model.¹¹⁴ Safir technology could be used to develop long-range ballistic missiles.

Iran claimed that it launched a monkey into space and returned it safely to Earth twice in

2013.¹¹⁵ Tehran also announced in June 2013 that it had established its first space tracking center to monitor objects in “very remote space” and help manage the “activities of satellites.”¹¹⁶ On July 27, 2017, Iran tested a Simorgh (Phoenix) space launch vehicle that it claimed could place a satellite weighing up to 250 kilograms (550 pounds) in an orbit of 500 kilometers (311 miles).¹¹⁷ The satellite launch failed, as did another Simorgh-boosted satellite launch in January 2019.¹¹⁸

In April 2020, Tehran finally discarded the pretense that its space program was dedicated exclusively to peaceful purposes. On April 22, Iran’s Revolutionary Guards launched a Noor (Light) satellite into a low Earth orbit from a secret missile base to celebrate the 41st anniversary of the IRGC’s founding. The new spy satellite’s path takes it over North Africa and the central Mediterranean, putting Israel within its potential field of vision approximately every 90 minutes.¹¹⁹ General Jay Raymond, commander of U.S. Space Command, dismissed the satellite as a “tumbling webcam in space,” but Iran’s real achievement focused more on the previously unheard-of satellite carrier, the Qased (Messenger), a three-stage system that used both solid and liquid fuel.¹²⁰ The technical advances required to launch a satellite are similar to those required to launch an ICBM, and the use of solid fuel could allow Iran to launch a missile more quickly—something that is crucial in an offensive weapon.

On February 2, 2021, Iran’s Defense Ministry announced the successful development of a new satellite launch vehicle, the Zuljanah. The first two stages of the three-stage rocket use solid fuel, and the rocket can be launched from a mobile launch pad—two characteristics more suitable for a weapons system than for a satellite launch system.¹²¹

Cyber Threats. Iranian cyber capabilities present a significant threat to the U.S. and its allies. Iran has developed offensive cyber capabilities as a tool of espionage and sabotage and claims “to possess the ‘fourth largest’ cyber force in the world—a broad network of quasi-official elements, as well as regime-aligned

‘hacktivists,’ who engage in cyber activities broadly consistent with the Islamic Republic’s interests and views.”¹²²

The creation of the Iranian Cyber Army in 2009 marked the beginning of a cyber offensive against those whom the Iranian regime regards as enemies. The Ajax Security Team, a hacking group believed to be operating out of Iran, has used malware-based attacks to target U.S. defense organizations and has breached the Navy Marine Corps Intranet.¹²³ The group also has targeted dissidents within Iran, seeding versions of anti-censorship tools with malware and gathering information about users of those programs.¹²⁴ Iran has invested heavily in cyber activity, reportedly spending “over \$1 billion on its cyber capabilities in 2012 alone.”¹²⁵

An April 2015 study released by the American Enterprise Institute reported that hostile Iranian cyber activity had increased significantly since the beginning of 2014 and could threaten U.S. critical infrastructure. The Islamic Revolutionary Guard Corps and Sharif University of Technology are two Iranian institutions that investigators have linked to efforts to infiltrate U.S. computer networks.¹²⁶

Iran allegedly has used cyber weapons to engage in economic warfare, most notably the sophisticated and debilitating “[distributed] denial-of-service (DDoS) attacks against a number of U.S. financial institutions, including the Bank of America, JPMorgan Chase, and Citigroup.”¹²⁷ In February 2014, Iran launched a crippling cyberattack against the Sands Casino in Las Vegas, owned by Sheldon Adelson, a leading supporter of Israel and critic of the Iranian regime.¹²⁸ In 2012, Tehran was suspected of launching both the Shamoon virus attack on Saudi Aramco, the world’s largest oil-producing company—an attack that destroyed approximately 30,000 computers—and an attack on Qatari natural gas company Rasgas’s computer networks.¹²⁹

Israel has been a major target of Iranian cyberattacks. In 2014, Iranian hackers launched denial-of-service attacks against the infrastructure of the Israel Defense Forces. On April 24, 2020, an Iranian cyberattack targeted the

command and control center of Israel's Water Authority, disrupting operations of Israeli water and sewage facilities. According to an Israeli cyber expert, the operation was "a first-of-its-kind attack and they were not far from inflicting human casualties."¹³⁰ Israel retaliated with a May 9, 2020, cyberattack that disrupted operations at one of Iran's most important port facilities, the Shahid Rajaei terminal in Bandar Abbas.¹³¹ In September 2020, a hacker group linked to Iran targeted "many prominent Israeli organizations" according to the Israeli cybersecurity company Clearsky. The group, named MuddyWater, used malware disguised as ransomware that would encrypt files and demand payment but not allow the files to be accessed.¹³²

In the fall of 2015, U.S. officials warned of a surge of sophisticated computer espionage by Iran that would include a series of cyberattacks against State Department officials.¹³³ In March 2016, the Justice Department indicted seven Iranian hackers for penetrating the computer system that controlled a dam in the State of New York.¹³⁴ In April 2020, Iran-linked hackers targeted staff at the World Health Organization and the U.S. pharmaceutical company Gilead Sciences Inc., a leader in developing a treatment for the COVID-19 virus.¹³⁵

The growing sophistication of these and other Iranian cyberattacks, together with Iran's willingness to use these weapons, has led various experts to characterize Iran as one of America's most cyber-capable opponents. Iranian cyber forces have gone so far as to create fake online personas in order to extract information from U.S. officials through such accounts as LinkedIn, YouTube, Facebook, and Twitter.¹³⁶ Significantly, the FBI sent the following cyber alert to American businesses on May 22, 2018:

The FBI assesses [that] foreign cyber actors operating in the Islamic Republic of Iran could potentially use a range of computer network operations—from scanning

networks for potential vulnerabilities to data deletion attacks—against U.S.-based networks in response to the U.S. government's withdrawal from the Joint Comprehensive Plan of Action (JCPOA).¹³⁷

On November 4, 2020, the U.S. Department of Justice announced that it had seized 27 domain names used by Iran's IRGC in a global covert influence campaign.¹³⁸ The Office of the Director of National Intelligence released a report on March 16, 2021, assessing that during the 2020 U.S. presidential election:

Iran carried out a multi-pronged covert influence campaign intended to undercut former President Trump's reelection prospects—though without directly promoting his rivals—undermine public confidence in the electoral process and US institutions, and sow division and exacerbate societal tensions in the US.¹³⁹

Conclusion

Iran represents by far the most significant security challenge to the United States, its allies, and its interests in the greater Middle East. Its open hostility to the United States and Israel, sponsorship of terrorist groups like Hezbollah, and history of threatening the commons underscore the problem. Today, Iran's provocations are mostly a concern for the region and America's allies, friends, and assets there. Iran relies heavily on irregular (to include political) warfare against others in the region and fields more ballistic missiles than any of its neighbors field. The development of its ballistic missiles and potential nuclear capability also mean that it poses a significant long-term threat to the security of the U.S. homeland.

This *Index* therefore assesses the overall threat from Iran, considering the range of contingencies, as "aggressive." Iran's capability score holds at "gathering."¹⁴⁰

Threats: Iran

	HOSTILE	AGGRESSIVE	TESTING	ASSERTIVE	BENIGN
Behavior		✓			

	FORMIDABLE	GATHERING	CAPABLE	ASPIRATIONAL	MARGINAL
Capability		✓			

Endnotes

1. Rebecca Leung, "Hezbollah: 'A-Team of Terrorists,'" CBS News, *60 Minutes*, April 18, 2003, <http://www.cbsnews.com/news/hezbollah-a-team-of-terrorists/> (accessed June 10, 2021).
2. Dana Priest and Nora Boustany, "Buckley's Remains Identified," *The Washington Post*, December 28, 1991, <https://www.washingtonpost.com/archive/politics/1991/12/28/buckleys-remains-identified/5b3bf0cc-41c2-4a1c-aa0b-27be8c3795d2/> (accessed June 10, 2021).
3. Suzanne Kelly, "Experts: Hezbollah Positioned for Attack in U.S.," CNN, March 21, 2012, <http://security.blogs.cnn.com/2012/03/21/house-panel-hears-testimony-on-hezbollah-in-u-s/> (accessed June 10, 2021).
4. Ellie Kaufman, "2 Americans Led Double Lives as Hezbollah Agents, Officials Say," CNN, updated June 9, 2017, <http://www.cnn.com/2017/06/08/us/americans-accused-hezbollah-agents/> (accessed June 10, 2021).
5. Nathan A. Sales, Ambassador-at-Large and Coordinator for Counterterrorism, and Nicholas J. Rasmussen, National Counterterrorism Center Director, "Briefing on U.S. Efforts to Counter Hizballah," U.S. Department of State, October 10, 2017, <https://2017-2021.state.gov/briefing-on-u-s-efforts-to-counter-hizballah/index.html> (accessed June 10, 2021).
6. Jason Hanna, Elizabeth Joseph, and Brynn Gingras, "A New Jersey Man Scouted US Landmarks for Potential Hezbollah Attacks, Charges Allege," CNN, September 20, 2019, <https://www.cnn.com/2019/09/20/us/hezbollah-us-terror-charges/index.html> (accessed June 10, 2021).
7. "Summary of Terrorism Threat to the U.S. Homeland," U.S. Department of Homeland Security, National Terrorism Advisory System *Bulletin*, January 4, 2020, https://www.dhs.gov/sites/default/files/ntas/alerts/20_0104_ntas_bulletin.pdf (accessed June 10, 2021).
8. "(U/FOUO) Escalating Tensions Between the United States and Iran Pose Potential Threats to the Homeland," *Joint Intelligence Bulletin*, January 8, 2020, p. 1, <https://info.publicintelligence.net/DHS-FBI-NCTC-IranThreats-2020.pdf> (accessed June 10, 2021).
9. Sara Taha Moughnieh, "Sayyed Nasrallah: Suleimani Revenge Is Long Track, Trump Biggest Liar in History of US Presidency," Al-Manar, January 12, 2020, <https://english.almanar.com.lb/913904> (accessed June 10, 2021).
10. Tom Winter and Pete Williams, "Feds Charge Ex-Venezuelan Politician with Recruiting Terrorists to Attack U.S. Interests," NBC News, May 27, 2020, <https://www.nbcnews.com/politics/justice-department/feds-charge-ex-venezuelan-politician-recruiting-terrorists-attack-u-s-n1215871> (accessed June 10, 2021).
11. Michael Elleman, "Iran's Missiles: Evolution and Arsenal," United States Institute of Peace, *The Iran Primer*, January 15, 2021, <https://iranprimer.usip.org/blog/2021/jan/15/biden-iran-missile-program> (accessed June 10, 2021).
12. Kenneth Katzman, "Iran's Foreign and Defense Policies," Congressional Research Service *Report for Members and Committees of Congress No. R44017*, updated January 11, 2021, pp. 10 and 12, <https://fas.org/sgp/crs/mideast/R44017.pdf> (accessed June 10, 2021).
13. Sune Engel Rasmussen, "Iran Satellite Launch Reveals Gains in Missile Program," *The Wall Street Journal*, updated May 1, 2020, <https://www.wsj.com/articles/iran-satellite-launch-reveals-gains-in-missile-program-11588330800> (accessed June 11, 2021).
14. Anthony Cordesman, with the assistance of Bryan Gold and Garrett Berntsen, *The Gulf Military Balance, Volume I: The Conventional and Asymmetric Dimensions*, Center for Strategic and International Studies, January 2014, pp. 14–16, https://csis-website-prod.s3.amazonaws.com/s3fs-public/legacy_files/files/publication/140131_Cordeman_GulfMilitaryBalance_VolumeI_Web.pdf (accessed June 10, 2021).
15. Elias Groll, "Iran Is Deploying Drones in Iraq. Wait, What? Iran Has Drones?" *Foreign Policy*, June 25, 2014, <https://foreignpolicy.com/2014/06/25/iran-is-deploying-drones-in-iraq-wait-what-iran-has-drones/> (accessed June 10, 2021).
16. Saeed Ghasseminejad, "Iran Doubles Down on Its Military Budget," Foundation for Defense of Democracies *Policy Brief*, June 3, 2016, <http://www.defenddemocracy.org/media-hit/saeed-ghasseminejad-iran-doubles-down-on-its-military-budget/> (accessed June 10, 2021).
17. International Institute for Strategic Studies, *The Military Balance 2020: The Annual Assessment of Global Military Capabilities and Defence Economics* (London: Routledge, 2020), p. 348.
18. International Institute for Strategic Studies, *The Military Balance 2021: The Annual Assessment of Global Military Capabilities and Defence Economics* (London: Routledge, 2021), p. 337.
19. Sima Shine and Zvi Magen, "President Rouhani's Visit to Russia: A New Level of Relations?" Tel Aviv University, Institute for National Security Studies, *INSS Insight* No. 914, April 5, 2017, p. 1, <https://www.inss.org.il/wp-content/uploads/2017/04/No.-914.pdf> (accessed June 11, 2021).

20. President of Russia, Events, "Meeting with President of Iran Hassan Rouhani," June 9, 2018, <http://en.kremlin.ru/events/president/news/57710> (accessed June 11, 2021).
21. Reuters, "Iran Says Russia Delivers First Part of S-300 Defense System," April 11, 2016, <http://www.reuters.com/article/us-russia-iran-arms-idUSKCN0X80MM?elqTrackId=e02d5aca6d48418984d902ced0c33d77&elq=39fecef381094e0cbc6de535feb74a3c&elqaid=17334&elqat=1&elqCampaignId=10743> (accessed June 11, 2021).
22. Tony Capaccio, "Iran's Russian Anti-Aircraft Missile Now Operational, U.S. Says," Bloomberg, last updated March 8, 2018, <https://www.bloomberqint.com/politics/iran-s-russian-anti-aircraft-missile-now-operational-u-s-says> (accessed June 11, 2021).
23. Farzin Nadimi, "Iran and Russia's Growing Defense Ties," Washington Institute for Near East Policy *PolicyWatch* No. 2563, February 18, 2016, <http://www.washingtoninstitute.org/policy-analysis/view/iran-and-russias-growing-defense-ties> (accessed June 11, 2021).
24. Sam Dagher and Asa Fitch, "Iran Expands Role in Syria in Conjunction with Russia's Airstrikes," *The Wall Street Journal*, October 2, 2015, <http://www.wsj.com/articles/iran-expands-role-in-syria-in-conjunction-with-russias-airstrikes-1443811030> (accessed June 11, 2021).
25. Nader Uskowi, "The Evolving Iranian Strategy in Syria: A Looming Conflict with Israel," Atlantic Council, Scowcroft Center for Strategy and Security *Issue Brief*, September 2018, p. 2, https://www.atlanticcouncil.org/wp-content/uploads/2019/09/The_Evolving_Iranian_Strategy_in_Syria.pdf (accessed June 11, 2021).
26. BBC News, "Syrian Conflict: Russian Bombers Use Iran Base for Air Strikes," August 16, 2016, <https://www.bbc.com/news/world-middle-east-37093854> (accessed June 11, 2021).
27. Oren Liebermann, Salma Abdelaziz, and James Masters, "Netanyahu Says Iran 'Crossed a Red Line' After Israel Pounds Iranian Targets in Syria," CNN, updated May 11, 2018, <https://www.cnn.com/2018/05/09/middleeast/israel-rockets-syria/index.html> (accessed June 11, 2021).
28. Carla E. Humud, Kenneth Katzman, and Jim Zanotti, "Iran and Israel: Tension over Syria," Congressional Research Service *In Focus* No. 10858, updated June 5, 2019, <https://fas.org/sgp/crs/mideast/IF10858.pdf> (accessed June 11, 2021).
29. Anna Ahronheim and Seth J. Frantzman, "Israel Strikes Syria in Rare Daytime Attack; Syria Fires at Golan," *The Jerusalem Post*, January 20, 2019, <https://www.jpost.com/Breaking-News/Report-Israel-Air-Force-strikes-southern-Syria-578020> (accessed June 11, 2021).
30. Tia Goldenburg, "Israeli Military Says Iran Is Slowly Pulling out of Syria," Associated Press, May 21, 2020, <https://apnews.com/d6a925c30084a34307a817de2f999bb1> (accessed June 11, 2021).
31. Anna Ahronheim, "Hezbollah Training Syria's 1st Corps to Use in Future War Against Israel," *The Jerusalem Post*, May 21, 2020, <https://www.jpost.com/arab-israeli-conflict/hezbollah-training-syrias-1st-corps-to-use-in-future-war-against-israel-628833> (accessed June 11, 2021).
32. Yaniv Kubovich, "Iranian Redeployment in Iraq Behind Israel's Alleged Syria Strike, Sources Say," *Haaretz*, January 14, 2021, <https://www.haaretz.com/middle-east-news/.premium-sources-iranian-redeployment-in-western-iraq-behind-israel-s-alleged-syria-strike-1.9449515> (accessed June 11, 2021).
33. Michael Bachner, "Israel Said to Hit Iranian Sites in Iraq, Expanding Strikes on Missile Shipments," *The Times of Israel*, July 30, 2019, <https://www.timesofisrael.com/israel-said-to-hit-iranian-sites-in-iraq-expanding-strikes-on-missile-shipments/> (accessed June 11, 2021).
34. Kyle Rempfer, "Iran Killed More US Troops in Iraq than Previously Known, Pentagon Says," *Military Times*, April 4, 2019, <https://www.militarytimes.com/news/your-military/2019/04/04/iran-killed-more-us-troops-in-iraq-than-previously-known-pentagon-says/> (accessed June 11, 2021).
35. See section on "Mounting Missile Threat," *infra*.
36. Phillip Smyth, "Why Biden's Airstrikes on Iran Militias Matter," Washington Institute for Near East Policy, *Policy Analysis*, February 26, 2021, <https://www.washingtoninstitute.org/policy-analysis/why-bidens-airstrikes-iran-militias-matter> (accessed June 11, 2021).
37. Louisa Loveluck and John Hudson, "Iran-Backed Militias Turn to Drone Attacks, Alarming U.S. Forces in Iraq," *The Washington Post*, May 29, 2021, https://www.washingtonpost.com/world/middle_east/iraq-militia-drones-threat/2021/05/28/864e44d0-bc8f-11eb-922a-c40c9774bc48_story.html (accessed June 11, 2021).
38. Matthew Levitt, "A Proxy for Iran," Washington Institute for Near East Policy, *Policy Analysis*, July 14, 2016, <http://www.washingtoninstitute.org/policy-analysis/view/a-proxy-for-iran> (accessed June 11, 2021).
39. Yaya J. Fanusie and Alex Entz, "Hezbollah: Financial Assessment," Foundation for Defense of Democracies, Center on Sanctions and Illicit Finance, *Terror Finance Briefing Book*, September 2017, p. 8, http://www.defenddemocracy.org/content/uploads/documents/CSIF_TFBB_Hezbollah.pdf (accessed June 11, 2021).

40. Benjamin Weinthal, "Germany Sees Increase of Hezbollah Supporters and Members—Intel," *The Jerusalem Post*, June 5, 2021, <https://www.jpost.com/international/germany-sees-increase-of-hezbollah-supporters-and-members-intel-670092> (accessed June 11, 2021).
41. James Phillips, "Hezbollah's Terrorist Threat to the European Union," testimony before the Subcommittee on Europe, Committee on Foreign Affairs, U.S. House of Representatives, June 20, 2007, <http://www.heritage.org/research/testimony/hezbollahs-terrorist-threat-to-the-european-union>.
42. Matthew Levitt, "Inside Hezbollah's European Plots," Washington Institute for Near East Policy, *Policy Analysis*, July 20, 2015, <https://www.washingtoninstitute.org/policy-analysis/view/inside-hezbollahs-european-plots> (accessed June 11, 2021).
43. Nuclear Threat Initiative, "Iran: Missile," last updated July 2017, <https://www.nti.org/learn/countries/iran/delivery-systems/> (accessed June 11, 2021).
44. U.S. Central Command, "Transcript Gen. McKenzie, Gen. Townsend and Acting ASD for International Security Affairs Wheelbarger at HASC," DOD Transcripts, March 13, 2020, <https://www.centcom.mil/MEDIA/Transcripts/Article/2111116/transcript-gen-mckenzie-gen-townsend-and-acting-asd-for-international-security/> (accessed June 11, 2021). The hearing on "National Security Challenges and U.S. Military Activities in the Greater Middle East and Africa" was held on March 10, 2020, by the full Committee on Armed Services. The witnesses included Kathryn Wheelbarger, Assistant Secretary of Defense for International Security Affairs, U.S. Department of Defense; General Kenneth F. McKenzie Jr., U.S. Marine Corps, Commander, U.S. Central Command; and General Stephen Townsend, U.S. Army, Commander, U.S. Africa Command.
45. Amos Harel and Associated Press, "Iran's Missile Attack on Syria Failed: 5 Missed, 3 Landed in Iraq," *Haaretz*, June 21, 2017, <http://www.haaretz.com/middle-east-news/1.796836> (accessed June 11, 2021).
46. Humeyra Pamuk, "Exclusive: U.S. Probe of Saudi Oil Attack Shows It Came from North—Report," Reuters, December 19, 2019, <https://www.reuters.com/article/us-saudi-aramco-attacks-iran-exclusive/exclusive-u-s-probe-of-saudi-oil-attack-shows-it-came-from-north-report-idUSKBNIYN299> (accessed June 11, 2021).
47. Wesley Morgan, "Joint Chiefs Chairman: Iran Intended to Kill American Troops in Missile Attacks," *Politico*, January 8, 2020, <https://www.politico.com/news/2020/01/08/milley-iran-american-troops-missile-096402> (accessed June 11, 2021).
48. Nuclear Threat Initiative, "Iran: Missile."
49. Zachary Keck, "Iran Has Amassed the Largest Ballistic Missile Force in the Middle East," *The National Interest*, The Buzz Blog, May 22, 2019, <https://nationalinterest.org/blog/buzz/iran-has-amassed-largest-ballistic-missile-force-middle-east-58882> (accessed June 11, 2021).
50. Center for Strategic and International Studies, Missile Defense Project, "Shahab-3," *Missile Threat*, last updated June 15, 2018, <https://missilethreat.csis.org/missile/shahab-3/> (accessed June 11, 2021).
51. Lieutenant General Michael T. Flynn, U.S. Army, Director, Defense Intelligence Agency, "Annual Threat Assessment," statement before the Committee on Armed Services, U.S. Senate, February 11, 2014, p. [20], http://www.dia.mil/Portals/27/Documents/News/2014_DIA_SFR_SASC_ATA_FINAL.pdf (accessed June 11, 2021).
52. Tim Hume and Alireza Hajhosseini, "Iran Fires Ballistic Missiles a Day After Test; U.S. Officials Hint at Violation," CNN, updated March 9, 2016, <http://www.cnn.com/2016/03/09/middleeast/iran-missile-test/> (accessed June 11, 2021).
53. See section on "Iranian Threats to Israel," *infra*.
54. James Phillips, "Iran's Nuclear Program: What Is Known and Unknown," Heritage Foundation *Backgrounder* No. 2393, March 26, 2010, <http://www.heritage.org/research/reports/2010/03/iran-s-nuclear-program-what-is-known-and-unknown>, and Nuclear Threat Initiative, "Arak Nuclear Complex," last updated July 11, 2017, <http://www.nti.org/learn/facilities/177/> (accessed June 11, 2021).
55. Valerie Lincy and Gary Milhollin, "Iran's Nuclear Potential Before the Implementation of the Nuclear Agreement," Wisconsin Project for Nuclear Arms Control, *Iran Watch*, November 18, 2015, <http://www.iranwatch.org/our-publications/articles-reports/irans-nuclear-timetable> (accessed June 11, 2021).
56. News release, "Statement by the President on Iran," The White House, July 14, 2015, <https://www.whitehouse.gov/the-press-office/2015/07/14/statement-president-iran> (accessed June 11, 2021).
57. "Remarks by President Trump on the Joint Comprehensive Plan of Action," The White House, May 8, 2018, <https://uy.usembassy.gov/remarks-by-president-trump-on-the-joint-comprehensive-plan-of-action/> (accessed June 11, 2021). See also Donald J. Trump, National Security Presidential Memorandum/NSPM-11, May 8, 2018, "SUBJECT: Ceasing United States Participation in the Joint Comprehensive Plan of Action and Taking Additional Action to Counter Iran's Malign Influence and Deny Iran All Paths to a Nuclear Weapon," <https://fas.org/irp/offdocs/nspm/nspm-11.pdf> (accessed June 11, 2021).

58. James Phillips, "Sanctioning Revolutionary Guard as Terrorist Group Will Hit Iran Hard. Here's Why," *The Daily Signal*, April 8, 2019, <https://www.heritage.org/middle-east/commentary/sanctioning-revolutionary-guard-terrorist-group-will-hit-iran-hard-heres-why>.
59. David Adesnik, "U.S. Aims Lethal Blow at Tehran's Finances by Prohibiting Oil Exports," *Foundation for the Defense of Democracies Policy Brief*, April 23, 2019, <https://www.fdd.org/analysis/2019/04/23/u-s-aims-lethal-blow-at-tehrans-finances-by-prohibiting-oil-exports/> (accessed June 11, 2021).
60. James Griffiths, Joshua Berlinger, and Sheena McKenzie, "Iranian Leader Announces Partial Withdrawal from Nuclear Deal," *CNN*, updated May 8, 2019, <https://www.cnn.com/2019/05/08/middleeast/iran-nuclear-deal-intl/index.html> (accessed June 11, 2021).
61. Peter Brookes, Brett D. Schaefer, and James Phillips, "Iran Nuclear Deal: Next Steps," *Heritage Foundation Issue Brief* No. 5030, January 29, 2020, <https://www.heritage.org/middle-east/report/iran-nuclear-deal-next-steps> (accessed June 11, 2021).
62. David Albright and Sarah Burkhard, "Iranian Breakout Estimates and Enriched Uranium Stocks," *Institute for Science and International Security Report*, April 21, 2020, pp. 1 and 10, https://isis-online.org/uploads/isis-reports/documents/Breakout_and_LEU_stocks_April_21%2C_2020_final.pdf (accessed June 11, 2021).
63. David Albright, Sarah Burkhard, and Andrea Stricker, "Analysis of IAEA Iran Verification and Monitoring Report," *Institute for Science and International Security Report*, February 25, 2021, pp. 1 and 10, https://isis-online.org/uploads/isis-reports/documents/IAEA_Iran_Verification_Report_Analysis_for_February_2021_Final.pdf (accessed June 11, 2021).
64. Ronen Bergman, Rick Gladstone, and Farnaz Fassihi, "Blackout Hits Iran Nuclear Site in What Appears to Be Israeli Sabotage," *The New York Times*, updated April 12, 2021, <https://www.nytimes.com/2021/04/11/world/middleeast/iran-nuclear-natanz.html> (accessed June 11, 2021).
65. Cordesman et al., *The Gulf Military Balance, Volume I: The Conventional and Asymmetric Dimensions*, p. 19.
66. Kenneth Katzman, "Iran: Politics, Gulf Security, and U.S. Policy," *Congressional Research Service Report for Members and Committees of Congress* No. RL32048, August 19, 2016, p. 25, http://www.parstimes.com/history/crs_august_16.pdf (accessed June 11, 2021).
67. Richard Natonski and Jonathan Ruhe, "Learn from Gaza, Prepare for Hezbollah," *Breaking Defense*, May 24, 2021, <https://breakingdefense.com/2021/05/learn-from-gaza-prepare-for-hezbollah/> (accessed June 11, 2021).
68. Avi Issacharoff, "Israel Raises Hezbollah Rocket Estimate to 150,000," *The Times of Israel*, November 12, 2015, <http://www.timesofisrael.com/israel-raises-hezbollah-rocket-estimate-to-150000/> (accessed June 11, 2021).
69. TOI Staff, "Iran Unveils Kit to Convert Artillery Rockets into Guided Missiles," *The Times of Israel*, October 7, 2019, <https://www.timesofisrael.com/iran-unveils-kit-to-convert-artillery-rockets-into-guided-missiles/> (accessed June 11, 2021).
70. Israel Defense Forces, "4 Reasons Why Hamas Is a Terror Organization," June 12, 2017, <https://www.idf.il/en/minisites/hamas/4-reasons-why-hamas-is-a-terror-organization/> (accessed June 11, 2021).
71. Felicia Schwartz and Dov Lieber, "Israel Blames Islamic Jihad for Spoiling Gaza Truce Talks," *The Wall Street Journal*, May 6, 2019, <https://www.wsj.com/articles/israel-blames-islamic-jihad-for-spoiling-gaza-truce-talks-11557165910> (accessed June 11, 2021).
72. Grant Rumley and Neri Zilber, "A Military Assessment of the Israel-Hamas Conflict," *Washington Institute for Near East Policy, PolicyWatch* No. 3489, May 25, 2021, <https://www.washingtoninstitute.org/policy-analysis/military-assessment-israel-hamas-conflict> (accessed June 11, 2021).
73. Middle East Media Research Institute, "Former IRGC General Close to Supreme Leader Khamenei: 'Bahrain Is a Province of Iran That Should Be Annexed to [It],'" *Special Dispatch* No. 6358, March 23, 2016, <http://www.memri.org/report/en/0/0/0/0/0/0/9090.htm> (accessed June 11, 2021).
74. Maayan Groisman, "Iranian Commander Threatens to Make Bahrain's Royal Family 'Disappear,'" *The Jerusalem Post*, June 21, 2016, <http://www.jpost.com/Middle-East/Iran-News/Iranian-Quds-Force-commander-threatens-to-make-Bahrains-royal-family-disappear-457354> (accessed June 11, 2021).
75. Ben Hubbard, "Saudi Arabia Cuts Ties with Iran amid Fallout of Cleric's Execution," *The New York Times*, January 3, 2016, <https://www.nytimes.com/2016/01/04/world/middleeast/iran-saudi-arabia-execution-sheikh-nimr.html> (accessed June 11, 2021), and BBC News, "UN Condemns Attack on Saudi Embassy in Iran," January 5, 2016, <https://www.bbc.com/news/world-middle-east-35229385> (accessed June 15, 2021).
76. Jon Gambrell, "Bomb-Laden Drones of Yemen Rebels Threaten Arabian Peninsula," *Associated Press*, May 16, 2019, <https://www.apnews.com/18f9c169f398464ba53c19e3963d3fba> (accessed June 11, 2021).
77. Michael Knights, "Drones over Riyadh: Unpacking the Iran Threat Network's Tactics," *Washington Institute for Near East Policy, PolicyWatch* No. 3427, January 29, 2021, <https://www.washingtoninstitute.org/policy-analysis/drones-over-riyadh-unpacking-iran-threat-networks-tactics> (accessed June 11, 2021).

78. U.S. Department of Energy, U.S. Energy Information Administration, "Oil and Petroleum Products Explained," last updated April 8, 2021, <https://www.eia.gov/energyexplained/oil-and-petroleum-products/where-our-oil-comes-from.php> (accessed June 11, 2021).
79. U.S. Department of Energy, U.S. Energy Information Administration, "Today in Energy: The Strait of Hormuz Is the World's Most Important Oil Transit Chokepoint," June 20, 2019, <https://www.eia.gov/todayinenergy/detail.php?id=39932#> (accessed June 11, 2021).
80. Thom Shanker, "Rice Dismisses Iranian Cleric's Warning on Oil," *The New York Times*, June 5, 2006, http://www.nytimes.com/2006/06/05/world/middleeast/05diplo.html?_r=0 (accessed June 11, 2021).
81. Radio Free Europe/Radio Liberty, "Iranian Commander Says Navy Could Shut down Strait of Hormuz If Needed," updated April 28, 2019, <https://www.rferl.org/a/iran-suggests-quitting-nuclear-treaty-after-u-s-tightens-sanctions/29908567.html?lflags=mailer> (accessed June 11, 2021).
82. BBC News, "Tankers Almost Certainly Damaged by Iranian Naval Mines, US Says," May 29, 2019, <https://www.bbc.com/news/world-middle-east-48443454> (accessed June 11, 2021).
83. Sam LaGrone, "Analyst: New Photos Are 'Smoking Gun' Proving Iranian Involvement in Tanker Attack," U.S. Naval Institute News, updated June 18, 2019, <https://news.usni.org/2019/06/17/analyst-new-photos-are-smoking-gun-proving-iranian-involvement-in-tanker-attack> (accessed June 11, 2021).
84. Michael R. Gordon, Sune Engel Rasmussen, and Siobhan Hedges, "U.S. Planned Strike on Iran After Downing of Drone but Called Off Mission," *The Wall Street Journal*, updated June 21, 2019, <https://www.wsj.com/articles/u-s-and-iran-move-closer-to-military-conflict-after-downing-of-drone-11561076307> (accessed June 11, 2021).
85. Farnaz Fassihi, "Iranian Friendly Fire Kills 19 in 2nd Missile Accident of Year," *The New York Times*, May 10, 2020, <https://www.nytimes.com/2020/05/10/world/middleeast/iran-ship-dead.html> (accessed June 11, 2021).
86. Sune Engel Rasmussen, "Iran Investigates Fire That Sank One of Its Largest Navy Ships," *The Wall Street Journal*, updated June 2, 2021, <https://www.wsj.com/articles/iranian-navy-ship-sinks-after-catching-fire-in-gulf-of-oman-11622634903> (accessed June 11, 2021).
87. Farzin Nadimi, "Iran and Israel's Undeclared War at Sea (Part 2): The Potential for Military Escalation," Washington Institute for Near East Policy, *PolicyWatch* No. 3470, April 13, 2021, <https://www.washingtoninstitute.org/policy-analysis/iran-and-israels-undeclared-war-sea-part-2-potential-military-escalation> (accessed June 11, 2021).
88. Ibid.
89. Tom O'Connor, "Iran's Military Fires New Cruise Missiles amid Gulf Tensions with U.S.," *Newsweek*, April 26, 2017, <https://www.newsweek.com/iran-military-fire-cruise-missiles-gulf-tensions-us-590462> (accessed June 11, 2021), and Editor, "Iranian Navy Test-Fires Long-Range Qadir Cruise Missile During Drills," *DefenceTalk.com*, January 26, 2018, <https://www.defencetalk.com/iranian-navy-test-fires-long-range-qadir-cruise-missile-during-drills-71175/> (accessed June 11, 2021).
90. U.S. Department of Defense, Defense Intelligence Agency, *Iran Military Power: Ensuring Regime Survival and Securing Military Dominance*, 2019, pp. 32 and 55, https://www.dia.mil/Portals/27/Documents/News/Military%20Power%20Publications/Iran_Military_Power_LR.pdf (accessed June 11, 2021).
91. Cordesman et al., *The Gulf Military Balance, Volume I: The Conventional and Asymmetric Dimensions*, p. 205.
92. Michael Knights, *Troubled Waters: Future U.S. Security Assistance in the Persian Gulf*, Washington Institute for Near East Policy, 2006, p. 71, <https://www.washingtoninstitute.org/policy-analysis/troubled-waters-future-us-security-assistance-persian-gulf> (accessed June 11, 2021).
93. Cordesman et al., *The Gulf Military Balance, Volume I: The Conventional and Asymmetric Dimensions*, pp. 82–95.
94. Fariborz Haghsheenas, "Iran's Asymmetric Naval Warfare," Washington Institute for Near East Policy, *Policy Focus* No. 87, September 2008, p. 1, <https://www.washingtoninstitute.org/policy-analysis/irans-asymmetric-naval-warfare> (accessed June 11, 2021).
95. Asa Fitch, "Iranian Authorities Release Maersk Tigris," *The Wall Street Journal*, updated May 7, 2015, <http://www.wsj.com/articles/iranian-authorities-release-maersk-tigris-1430991500> (accessed June 11, 2021).
96. Jonathan Saul, "Tanker Attacked by Iranian Craft Collided with Iran Oil Platform in March: Owner," Reuters, May 15, 2015, <https://www.reuters.com/article/us-gulf-iran-ship/tanker-attacked-by-iranian-craft-collided-with-iran-oil-platform-in-march-owner-idUSKBN001F620150515> (accessed June 11, 2021).
97. James Phillips, "The Dangerous Regional Implications of the Iran Nuclear Agreement," Heritage Foundation *Backgrounder* No. 3124, May 9, 2016, <http://www.heritage.org/middle-east/report/the-dangerous-regional-implications-the-iran-nuclear-agreement>.

98. Jeanette Steele, "Why Is Iran Harassing U.S. Warships?" *The San Diego Union-Tribune*, August 26, 2016, <https://www.sandiegouniontribune.com/military/sdut-iran-navy-harass-analysis-2016aug26-htmlstory.html> (accessed June 11, 2021).
99. Robert Burns, "US Military Official: Iran Naval Forces Halt 'Provocations,'" Associated Press, March 15, 2018, <https://www.apnews.com/a36e23a8d549464caaea7dc1932babae> (accessed June 11, 2021).
100. U.S. 5th Fleet, "IRGCN Vessels Conduct Unsafe, Unprofessional Interaction with U.S. Naval Forces in Arabian Gulf," U.S. Central Command, April 15, 2020, <https://www.centcom.mil/MEDIA/NEWS-ARTICLES/News-Article-View/Article/2151736/irgcn-vessels-conduct-unsafe-unprofessional-interaction-with-us-naval-forces-in/> (accessed June 11, 2021).
101. Sam LaGrone, "U.S. Sailors Fire Warning Shots to Ward off Harassing Iranian Fast Boats in Persian Gulf," U.S. Naval Institute News, April 27, 2021, <https://news.usni.org/2021/04/27/u-s-sailors-fire-warning-shots-to-ward-off-harassing-iranian-fast-boats-in-persian-gulf> (accessed June 11, 2021).
102. "Why Vessels Passing near Iran May Have Trouble Staying on Course," *The Economist*, May 22, 2021, <https://www.economist.com/middle-east-and-africa/2021/05/22/why-vessels-passing-near-iran-may-have-trouble-staying-on-course> (accessed June 11, 2021).
103. Kenneth Katzman, Neelesh Nerurkar, Ronald O'Rourke, R. Chuck Mason, and Michael Ratner, "Iran's Threat to the Strait of Hormuz," Congressional Research Service *Report for Members and Committees of Congress* No. R42335, January 23, 2012, p. 9, <https://fas.org/sgp/crs/mideast/R42335.pdf> (accessed June 11, 2021).
104. Sune Engel Rasmussen, "Iran's Fast Boats and Mines Bring Guerrilla Tactics to Persian Gulf," *The Wall Street Journal*, updated May 30, 2019, <https://www.wsj.com/articles/irans-fast-boats-and-mines-bring-guerrilla-tactics-to-persian-gulf-11559208602> (accessed June 11, 2021).
105. Paul Bucala, Caitlin Shayda Pendleton, Christopher Harmer, Emily Estelle, and Marie Donovan, "Iranian Involvement in Missile Attacks on the USS Mason," American Enterprise Institute, Critical Threats Project, October 19, 2016, <https://www.criticalthreats.org/analysis/iranian-involvement-in-missile-attacks-on-the-uss-mason> (accessed June 11, 2021).
106. Gambrell, "Bomb-Laden Drones of Yemen Rebels Threaten Arabian Peninsula."
107. United States Institute of Peace, The Iran Primer, "Timeline of Houthi Attacks on Saudi Arabia," September 16, 2019, <https://iranprimer.usip.org/blog/2019/sep/16/timeline-houthi-attacks-saudi-arabia> (accessed June 11, 2021).
108. Dion Nissenbaum, Summer Said, and Jared Malsin, "U.S. Tells Saudi Arabia Oil Attacks Were Launched from Iran," *The Wall Street Journal*, updated September 17, 2019, https://www.wsj.com/articles/u-s-tells-saudi-arabia-oil-attacks-were-launched-from-iran-11568644126?mod=hp_lead_pos1 (accessed June 11, 2021).
109. Michael Knights, "Continued Houthi Strikes Threaten Saudi Oil and the Global Economic Recovery," Washington Institute for Near East Policy, *PolicyWatch* No. 3449, March 12, 2021, <https://www.washingtoninstitute.org/policy-analysis/continued-houthi-strikes-threaten-saudi-oil-and-global-economic-recovery> (accessed June 11, 2021).
110. Jon Gambrell, "Bomb-Laden Drone from Yemen Rebels Targets Saudi Airport," Associated Press, May 21, 2019, <https://apnews.com/d7a332d8303349b6bc2f63b8eb8675e8> (accessed June 11, 2021).
111. Jon Gambrell, "US: Iran Military Could Misidentify Airliners amid Tension," Associated Press, May 18, 2019, <https://www.apnews.com/b4f5c00455fb4ffb878ed29df58abc03> (accessed June 11, 2021).
112. Farnaz Fassihi, "Anatomy of a Lie: How Iran Covered up the Downing of an Airliner," *The New York Times*, January 26, 2020, <https://www.nytimes.com/2020/01/26/world/middleeast/iran-plane-crash-coverup.html> (accessed June 11, 2021).
113. Nuclear Threat Initiative, "Iran: Missile."
114. Duncan Gardham, "WikiLeaks: Iran 'Obtains North Korea Missiles Which Can Strike Europe,'" *The Telegraph*, November 29, 2010, <https://www.telegraph.co.uk/news/worldnews/8166848/WikiLeaks-Iran-obtains-North-Korea-missiles-which-can-strike-Europe.html> (accessed June 11, 2021).
115. Lateef Mungin, "Iran Claims 2nd Launch of Monkey into Space and Back," CNN, updated December 14, 2013, <http://www.cnn.com/2013/12/14/world/meast/iran-monkey-space/> (accessed June 11, 2021).
116. Nasser Karimi, "Iran Says It Sets up Space Monitoring Center," *The San Diego Union-Tribune*, June 9, 2013, <https://www.sandiegouniontribune.com/sdut-iran-says-it-sets-up-space-monitoring-center-2013jun09-story.html> (accessed June 11, 2021).
117. Reuters, "U.S. Says Iran Rocket Test Breaches U.N. Resolution," July 27, 2017, <https://www.reuters.com/article/us-iran-satellite/u-s-says-iran-rocket-test-breaches-u-n-resolution-idUSKBN1ACIYY> (accessed June 11, 2021).
118. U.S. Department of Defense, Defense Intelligence Agency, *Iran Military Power: Ensuring Regime Survival and Securing Military Dominance*, p. 37.
119. Amir Vahdat and Jon Gambrell, "Iran Guard Reveals Secret Space Program in Satellite Launch," Associated Press, April 22, 2020, <https://apnews.com/0b45baa8a846f55e058e98905e290ce5> (accessed June 11, 2021).

120. J.D. Simkins, "Space Force General Trolls Iranian Military Satellite Launch—'Space Is Hard,'" *Military Times*, April 28, 2020, <https://www.militarytimes.com/off-duty/military-culture/2020/04/28/space-force-general-trolls-iranian-military-satellite-launch-space-is-hard/> (accessed June 11, 2021).
121. Michael Rubin, "Iran's Satellite Program Is All About Missiles," *1945*, February 8, 2021, <https://www.19fortyfive.com/2021/02/irans-satellite-program-is-all-about-missiles/> (accessed June 11, 2021).
122. Ilan Berman, Vice President, American Foreign Policy Council, "The Iranian Cyber Threat, Revisited," statement before the Subcommittee on Cybersecurity, Infrastructure Protection, and Security Technologies, Committee on Homeland Security, U.S. House of Representatives, March 20, 2013, p. 3, <https://docs.house.gov/meetings/HM/HM08/20130320/100523/HHRG-113-HM08-Wstate-BermanI-20130320.pdf> (accessed June 11, 2021).
123. "Report: Iran Hackers Infiltrated Airlines, Energy, Defense Firms," *Defense News*, December 2, 2014, <https://www.defensenews.com/global/mideast-africa/2014/12/02/report-iran-hackers-infiltrated-airlines-energy-defense-firms/> (accessed June 11, 2021).
124. Nart Villeneuve, Ned Moran, Thoufique Haq, and Mike Scott, "Operation Saffron Rose 2013," *FireEye Special Report*, 2014, <https://www.fireeye.com/content/dam/fireeye-www/global/en/current-threats/pdfs/rpt-operation-saffron-rose.pdf> (accessed June 11, 2021).
125. Ian Bremmer, "These 5 Facts Explain the State of Iran," *Time*, March 27, 2015, <http://time.com/3761786/5-facts-explain-iran-nuclear-talks-sanctions/> (accessed June 11, 2021). Israel's Institute for National Security Studies similarly reported in October 2012 that "[i]n order to realize the goals of its strategy, Iran has allocated about \$1 billion to develop and acquire technology and recruit and train experts." Gabi Siboni and Sami Kronenfeld, "Iran's Cyber Warfare," Tel Aviv University, Institute for National Security Studies, *INSS Insight* No. 375, October 15, 2012, p. 2, <https://www.inss.org.il/wp-content/uploads/systemfiles/375.pdf> (accessed June 11, 2021).
126. Frederick W. Kagan and Tommy Stiansen, *The Growing Cyberthreat from Iran: The Initial Report of Project Pistachio Harvest*, American Enterprise Institute Critical Threats Project and Norse Corporation, April 2015, passim, <https://www.aei.org/wp-content/uploads/2015/04/Growing-Cyberthreat-From-Iran-final.pdf> (accessed June 11, 2021).
127. Berman, "The Iranian Cyber Threat, Revisited," p. 3.
128. Tony Capaccio, David Lerman, and Chris Strohm, "Iran Behind Cyber-Attack on Adelson's Sands Corp., Clapper Says," *Bloomberg*, February 26, 2015, <http://www.bloomberg.com/news/articles/2015-02-26/iran-behind-cyber-attack-on-adelson-s-sands-corp-clapper-says> (accessed June 11, 2021).
129. Christopher Bronk and Eneken Tikk-Ringas, "The Cyber Attack on Saudi Aramco," *Survival: Global Politics and Strategy*, Vol. 55, No. 2 (April/May 2013), pp. 81–96.
130. Ben Caspit, "Israel Response to Cyber Attack Sends Clear Warning to Iran," *Al-Monitor*, May 22, 2020, <https://www.al-monitor.com/pulse/originals/2020/05/israel-us-iran-mike-pompeo-aviv-kochavi-cyberattack-port.html> (accessed June 11, 2021).
131. Joby Warrick and Ellen Nakashima, "Officials: Israel Linked to a Disruptive Cyberattack on Iranian Port Facility," *The Washington Post*, May 18, 2020, https://www.washingtonpost.com/national-security/officials-israel-linked-to-a-disruptive-cyberattack-on-iranian-port-facility/2020/05/18/9d1da866-9942-11ea-89fd-28fb313d1886_story.html (accessed June 11, 2021).
132. Clearsky Cyber Security, "Operation Quicksand: MuddyWater's Offensive Attack Against Israeli Organizations," October 2020, <https://www.clearskysec.com/wp-content/uploads/2020/10/Operation-Quicksand.pdf> (accessed June 11, 2021).
133. David E. Sanger and Nicole Perlroth, "Iranian Hackers Attack State Dept. via Social Media Accounts," *The New York Times*, November 24, 2015, http://www.nytimes.com/2015/11/25/world/middleeast/iran-hackers-cyberespionage-state-department-social-media.html?_r=0 (accessed June 11, 2021).
134. Ellen Nakashima and Matt Zapotosky, "U.S. Charges Iran-Linked Hackers with Targeting Banks, N.Y. Dam," *The Washington Post*, March 24, 2016, https://www.washingtonpost.com/world/national-security/justice-department-to-unseal-indictment-against-hackers-linked-to-iranian-government/2016/03/24/9b3797d2-f17b-11e5-a61f-e9c95c06edca_story.html (accessed June 11, 2021).
135. Jack Stubbs and Christopher Bing, "Exclusive: Iran-Linked Hackers Recently Targeted Coronavirus Drugmaker Gilead—Sources," *Reuters*, May 8, 2020, <https://www.reuters.com/article/us-healthcare-coronavirus-gilead-iran-ex/exclusive-iran-linked-hackers-recently-targeted-coronavirus-drugmaker-gilead-sources-idUSKBN22K2EV> (accessed June 11, 2021).
136. David E. Sanger, "Iran Hackers Dangle a Familiar Name to Fish for Data," *The New York Times*, May 30, 2014, http://www.nytimes.com/2014/05/31/world/middleeast/iran-hackers-dangle-a-familiar-name-to-fish-for-data.html?_r=2 (accessed June 11, 2021).
137. Bill Gertz, "FBI: Iran to Launch New Cyber Attacks," *The Washington Free Beacon*, May 24, 2018, <http://freebeacon.com/national-security/fbi-iran-launch-new-cyber-attacks/> (accessed June 11, 2021).
138. Andrew Hanna, "The Invisible U.S.–Iran Cyber War," United States Institute of Peace, *The Iran Primer*, updated March 31, 2021, <https://iranprimer.usip.org/blog/2019/oct/25/invisible-us-iran-cyber-war> (accessed June 11, 2021).

139. National Intelligence Council, "Foreign Threats to the 2020 U.S. Federal Elections," *Intelligence Community Assessment* ICA 2020-00078D, March 10, 2021, p. i, <https://www.dni.gov/files/ODNI/documents/assessments/ICA-declass-16MAR21.pdf> (June 11, 2021).
140. This *Index* scores threat capability as it relates to the vital national interests of the United States and the role and utility of U.S. military forces. Terrorist groups clearly have the ability to conduct attacks using improvised explosive devices (IEDs), firearms, and even hijacked airplanes. The bombing of the Boston Marathon in April 2013, an attempted car bomb attack in New York City's Times Square in May 2010, and al-Qaeda's attacks on September 11, 2001, are stark examples. Often, the U.S. has handled terrorism as a law enforcement and intelligence collection matter, especially within the United States and when it presents a threat to particular U.S. interests in other countries. Compared to the types of threats posed by states such as China or Russia, terrorism is a lesser sort of threat to the security and viability of the U.S. as a global power. This *Index* does not dismiss the deaths, injuries, and damage that terrorists can inflict on Americans at home and abroad; it places the threat posed by terrorism in context with substantial threats to the U.S. homeland, the potential for major regional conflict, and the potential to deny U.S. access to the global commons. With this in mind, terrorist groups seldom have the physical ability either to accomplish their extreme stated objectives or to present a physical threat that rises to a level that threatens U.S. vital security interests. Of course, terrorist organizations can commit acts of war on a continuing basis, as reflected in their conduct in the war against al-Qaeda and its associates in which the United States has been engaged for more than a decade.

North Korea

Bruce Klingner

North Korea is a perennial problem in Asia because of the regime's consistently provocative behavior and sustained investment in missile, nuclear, and cyber technologies that it sees as essential to maintaining power domestically and asserting its will internationally. Though not on the same scale as the threat posed by China or Russia, the threat that North Korea poses to the stability and security of the region and, given its developments in nuclear weapon delivery systems and cyberwarfare capabilities, to the United States and U.S. interests is significant.

Pyongyang now has a spectrum of missile systems that threaten the continental United States as well as U.S. forces and allies in Asia with nuclear weapons. On assuming power in 2011, Kim Jong-un accelerated nuclear and missile testing and oversaw an expansive diversification of North Korea's arsenal. New weapons overcame the shortcomings of their predecessors and now pose a far greater threat to allied forces in spite of advancements in missile defense systems.

Threats to the Homeland

In 2017, North Korea conducted three successful tests of two variants of its road-mobile intercontinental ballistic missile (ICBM), which "is capable of reaching anywhere in the U.S. mainland, according to United States Forces Korea's (USFK) first official assessment of the long-range missile."¹ In its October 2020 parade, North Korea revealed a new massive ICBM that may have the ability

to carry multiple warheads. In January 2021, Kim Jong-un declared that North Korea was in the final stages of perfecting the guidance technology for multi-warhead missiles.² Such missiles, combined with Pyongyang's recently confirmed ability to produce ICBM transporter-erector-launchers indigenously, risks overwhelming the limited missile defenses protecting the American homeland.

North Korea has conducted six nuclear tests, including a 2017 test of a much more powerful hydrogen bomb with an explosive yield approximately 10 times those of the Hiroshima and Nagasaki atomic bombs of World War II. In 2017, the U.S. Intelligence Community assessed that Pyongyang may have produced 30–60 warheads³ and can create enough fissile material for at least seven and as many as 12 warheads per year.⁴ By 2027, North Korea could have 200 nuclear weapons and several dozen ICBMs.⁵

Pyongyang has created a new generation of advanced mobile missiles that are more accurate, survivable, and capable of evading allied missile defenses. Pyongyang's evolving nuclear and missile forces increasingly give the regime the ability to conduct a surprise preemptive first-strike, retaliatory second-strike, and battlefield counterforce attacks.

In 2016 and 2017, North Korea successfully test-launched the Hwasong 12 intermediate-range ballistic missile, which can target critical U.S. bases in Guam, and both the Pukguksong-2 road-mobile medium-range ballistic missile and the Pukguksong-1

submarine-launched ballistic missile (SLBM).⁶ In 2019, North Korea conducted 26 missile launches, its highest-ever number of annual violations of U.N. resolutions. In March 2020, Pyongyang conducted another nine short-range missile launches, all of which were violations of U.N. resolutions.

In 2019, the regime unveiled five new short-range missile systems threatening South Korea, including a 400mm multiple rocket launcher (MRL); the KN-23 maneuverable missile, which is similar to the Russian Iskander; the KN-24 missile, which is similar to the U.S. Army's ATACMS; the KN-25 600mm MRL; and the Pukguksong-3 SLBM. The enhanced accuracy of these systems enables North Korea to accomplish counterforce operations with fewer missiles.

The KN-18 and KN-21 Scud variants have maneuverable reentry vehicles, and the KN-23's flight profile showed evasive characteristics instead of a typical ballistic parabola. The KN-23 was flown at depressed trajectories, potentially between the upper reach of Patriot missiles and below the minimum intercept altitude for Terminal High Altitude Area Defense (THAAD), with a final pull-up maneuver that provides a steep terminal descent,⁷ revealing that North Korea has studied U.S. and South Korean defensive systems in order to gain a military advantage with weapons that exploit gaps in coverage. The KN-23 could also be used in a first strike against leadership, hardened command and control, or high-value military targets.

North Korea has successfully tested the Pukguksong-1 (KN-11) and Pukguksong-3 (KN-26) SLBMs, which could target South Korea and Japan, potentially with a nuclear warhead. In its October 2020 and January 2021 parades, North Korea revealed the Pukguksong-4 and Pukguksong-5 SLBM missiles.

South Korea does not currently have defenses against SLBMs. Because the THAAD ballistic missile defense (BMD) system radar is limited to a 120-degree view that is directed toward North Korea, it cannot protect against SLBMs arriving from either the East or West Seas.⁸ The SM-2 missile currently deployed on

South Korean destroyers provides protection only against anti-ship missiles.

In June 2018, President Donald Trump met with Kim Jong-un in Singapore and subsequently declared that "there is no longer a nuclear threat from North Korea" and that "total denuclearization...has already started taking place."⁹ Secretary of State Michael Pompeo repeatedly claimed that North Korean leader Kim Jong-un had accepted U.N.-mandated complete, verifiable, and irreversible dismantling of his nuclear, missile, and biological and chemical weapons (BCW) programs. However, during the February 2019 Trump–Kim summit, it became clear that Kim had not agreed to do so and that the two sides still did not even have a common definition of "denuclearization" or what constitutes the Korean Peninsula. After October 2019, working-level diplomatic meetings collapsed, and North Korea rejected any further dialogue.

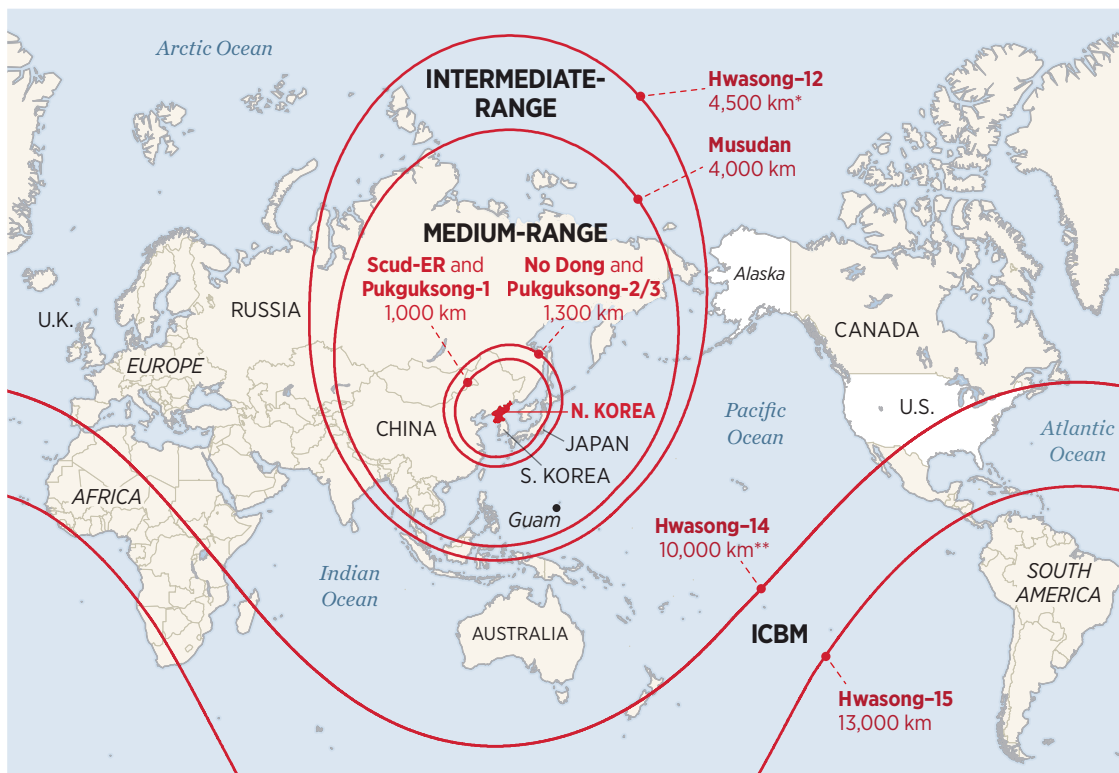
Despite three U.S.–North Korea summit meetings, there was no progress on denuclearization during the Trump Administration and no decrease in North Korea's weapons of mass destruction (WMD) arsenal or production capabilities. Pyongyang continued to increase its production of fissile material for nuclear weapons, and satellite imagery showed upgrades to missile, reentry vehicle, missile launcher, and nuclear weapon production facilities.¹⁰ The Intelligence Community assessed that North Korea "is unlikely to give up all of its WMD stockpiles, delivery systems, and production capabilities."¹¹

Threat of Regional War

In addition to its nuclear and missile forces, North Korea has approximately 1 million people in its military and reserves numbering several million more. Pyongyang has forward-deployed 70 percent of its ground forces, 60 percent of naval forces, and 40 percent of naval forces south of the Pyongyang–Wonsan line. South Korea assesses that North Korean forces "maintain a readiness posture capable of carrying out a surprise attack on the South at any time."¹²

The April 2018 inter-Korean summit led to bilateral pledges of nonaggression and mutual force reduction. Similar pledges were also

North Korean Missiles Can Target South Korea, Japan, U.S. Bases in Guam, and the United States



* First tested May 2017. ** First tested July 2017.

SOURCES: Heritage Foundation research and media reports.

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contained in the 1972, 1992, 2000, and 2007 joint statements, all of which Pyongyang subsequently violated or abrogated. None of those pledges prevented North Korea from conducting provocations, attempted assassinations of South Korea's president, terrorist acts, military and cyberattacks, and acts of war.

In September 2018, the two Koreas signed a Comprehensive Military Agreement to ease military tension and build confidence. The agreement sought to reduce the danger that inadvertent tactical military clashes along the Demilitarized Zone (DMZ) might escalate to larger strategic conflicts. However, static

defensive positions like fixed concrete bunkers and minefields are not threatening and have never been the source of military clashes on the peninsula. Rather, the greatest danger arises from the forward, offensively oriented disposition of North Korea's forces and the regime's history of making threats and initiating hostilities. The confidence-building measures implemented to date have not reduced North Korea's tactical or strategic conventional military threat to South Korea, nor do they represent progress in denuclearization.

Due to a predicted shortfall in 18-year-old conscripts, South Korea initiated a

comprehensive defense reform strategy to transform its military into a smaller but more capable force to deal with the North Korean threat. Overall, South Korean military manpower will be reduced approximately 25 percent, from 681,000 to a planned goal of 500,000. As of 2020, the South Korean military had a total strength of 550,000: 420,000 in the army, 70,000 in the navy, and 65,000 in the air force.¹³ Seoul planned to compensate for decreased troop levels by procuring advanced fighter and surveillance aircraft, naval platforms, and ground combat vehicles.¹⁴

That North Korea's conventional forces are a very real threat to South Korea was vividly demonstrated by two deadly attacks on South Korea in 2010. In March, a North Korean submarine sank the South Korean naval corvette *Cheonan* in South Korean waters, killing 46 sailors. In November, North Korean artillery shelled Yeonpyeong Island, killing four South Koreans.

Since the North Korean military is equipped predominantly with older ground force equipment, Pyongyang has prioritized deployment of strong asymmetric capabilities that include special operations forces, long-range artillery, and missiles. North Korea has deployed hundreds of short-range ballistic missiles that can target all of South Korea with explosive, chemical, and biological warheads. The land and sea borders between North and South Korea remain unsettled, heavily armed, and subject to occasional, limited armed conflict.

North Korean forces arrayed against American allies South Korea and Japan are substantial, and North Korea's history of provocation is a consistent indicator of its intent to achieve its political objectives by at least the threat of force. After assuming power, Kim Jong-un directed the North Korean military to develop a new war plan to invade and occupy South Korea within a week using asymmetric capabilities including nuclear weapons.¹⁵ North Korea has conducted several missile exercises and has subsequently announced that they were practice drills for preemptive nuclear attacks on South Korea and Japan.¹⁶

Threats to the Commons

Pyongyang has developed an advanced cyberwarfare prowess that is surpassed by that of few other nations. From initial rudimentary distributed denial-of-service (DDoS) attacks against South Korea, the regime has improved its cyber programs to create a robust and global array of disruptive military, financial, and espionage capabilities.

North Korea leader Kim Jong-un declared that cyber warfare is a "magic weapon"¹⁷ and an "all-purpose sword that guarantees the North Korean People's Armed Forces ruthless striking capability, along with nuclear weapons and missiles."¹⁸ In the run-up to a crisis or as an alternative to kinetic strikes, the regime could conduct cyberattacks on government and civilian computer networks controlling communications, finances, and infrastructure such as power plants and electrical grids.

As its cyber proficiencies have evolved, Pyongyang has implemented ever more sophisticated techniques and prioritized financial targets to evade international sanctions and increase its ability to finance its nuclear and missile programs. Pyongyang has conducted cyber guerrilla warfare to steal classified military secrets in addition to absconding with billions of dollars in money and cyber currency, holding computer systems hostage, and inflicting extensive damage on computer networks.

To the extent that the cyber domain is a "global commons" used by all people and countries, North Korea's investment in and exploitation of cyberwarfare capabilities presents a very real threat in this domain.

Conclusion

The North Korean military poses a security challenge for American allies South Korea and Japan, as well as for U.S. bases in those countries and Guam. North Korean officials are belligerent toward the United States, often issuing military and diplomatic threats. Pyongyang has also engaged in a range of provocative behavior, including nuclear and missile tests and tactical-level attacks on South Korea.

North Korea has used its missile and nuclear tests to enhance its prestige and importance domestically, regionally, and globally and to extract various concessions from the United States in negotiations over its nuclear program and various aid packages. Such developments also improve North Korea’s military posture. U.S. and allied intelligence agencies assess that Pyongyang has already achieved warhead

miniaturization, the ability to place nuclear weapons on its medium-range missiles, and the capability to reach the continental United States with a missile.

This *Index* assesses the overall threat from North Korea, considering the range of contingencies, as “testing” for level of provocative behavior and “gathering” for level of capability.

Threats: North Korea

	HOSTILE	AGGRESSIVE	TESTING	ASSERTIVE	BENIGN
Behavior			✓		
	FORMIDABLE	GATHERING	CAPABLE	ASPIRATIONAL	MARGINAL
Capability		✓			

Endnotes

1. Yonhap News Agency, "Most of America in Reach of North's Missile," *Korea JoongAng Daily*, July 11, 2019, <http://koreajoongangdaily.joins.com/news/article/Article.aspx?aid=3065390> (accessed May 25, 2021).
2. North Korean Ministry of Foreign Affairs, "Great Programme for Struggle Leading Korean-Style Socialist Construction to Fresh Victory: On Report Made by Supreme Leader Kim Jong Un at Eighth Congress of WPK," KCNA, January 9, 2021, <https://kcnawatch.org/newstream/1610272851-580631610/great-programme-for-struggle-leading-korean-style-socialist-construction-to-fresh-victory-on-report-made-by-supreme-leader-kim-jong-un-at-eighth-congress-of-wpk/?t=1610568921077> (accessed May 25, 2021).
3. Joby Warrick, Ellen Nakashima, and Anna Fifield, "North Korea Now Making Missile-Ready Nuclear Weapons, U.S. Analysts Say," *The Washington Post*, August 8, 2017, https://www.washingtonpost.com/world/national-security/north-korea-now-making-missile-ready-nuclear-weapons-us-analysts-say/2017/08/08/e14b882a-7b6b-11e7-9d08-b79f191668ed_story.html (accessed May 25, 2021); Deb Riechmann and Matthew Pennington, "Estimates of North Korea's Nuclear Weapons Hard to Nail Down," Associated Press, August 18, 2017, <https://apnews.com/53076b0dc7644f94b2751134a1d9d76b/Estimates-of-North-Korea-s-nuclear-weapons-hard-to-nail-down> (accessed May 25, 2021); and Jeong Yong-soo, Lee Chul-jae, and Sarah Kim, "North Could Have 60 Nuclear Warheads," *Korea JoongAng Daily*, February 9, 2017, <https://koreajoongangdaily.joins.com/news/article/article.aspx?aid=3029689> (accessed May 25, 2021).
4. Mary Beth D. Nikitin, "North Korea's Nuclear Weapons and Missile Programs," Congressional Research Service *In Focus* No. 10472, updated April 14, 2021, <https://crsreports.congress.gov/product/pdf/IF/IF10472> (accessed May 25, 2021), and Ankit Panda, "US Intelligence: North Korea May Already Be Annually Accruing Enough Fissile Material for 12 Nuclear Weapons," *The Diplomat*, August 9, 2017, <https://thediplomat.com/2017/08/us-intelligence-north-korea-may-already-be-annually-accruing-enough-fissile-material-for-12-nuclear-weapons/> (accessed May 25, 2021).
5. Bruce W. Bennett, Kang Choi, Myong-hyun Go, Bruce E. Bechtol, Jr., Jiyoung Park, Bruce Klingner, and Du-Hyeogn Cha, *Countering the Risks of North Korean Nuclear Weapons*, RAND Corporation *Perspective*, April 12, 2021, <https://www.rand.org/pubs/perspectives/PEA1015-1.html> (accessed May 25, 2021).
6. Joshua Berlinger, "North Korea's Missile Tests: What You Need to Know," CNN, updated December 3, 2017, <https://www.cnn.com/2017/05/29/asia/north-korea-missile-tests/index.html> (accessed May 25, 2021).
7. Jeff Jeong, "North Korea's New Weapons Take Aim at the South's F-35 Stealth Fighters," *Defense News*, August 1, 2019, <https://www.defensenews.com/digital-show-dailies/smd/2019/08/01/north-koreas-new-weapons-take-aim-at-souths-f-35-stealth-fighters/> (accessed May 25, 2021).
8. Bruce Klingner, "South Korea Needs THAAD Missile Defense," Heritage Foundation *Backgrounder* No. 3024, June 12, 2015, <https://www.heritage.org/defense/report/south-korea-needs-thaad-missile-defense>.
9. Reuters, "Trump Says North Korea 'No Longer a Nuclear Threat,'" June 13, 2018, <https://www.reuters.com/article/us-northkorea-usa-trump/trump-says-north-korea-no-longer-a-nuclear-threat-idUSKBN1J915T> (accessed May 26, 2021), and David Brunnstrom and James Oliphant, "Trump: North Korea 'Total Denuclearization' Started; Officials See No New Moves," Reuters, June 21, 2018, <https://www.reuters.com/article/us-northkorea-usa-sites/trump-north-korea-total-denuclearization-started-officials-see-no-new-moves-idUSKBN1JH2QX> (accessed May 25, 2021).
10. Jonathan Cheng, "North Korea Expands Key Missile-Manufacturing Plant," *The Wall Street Journal*, updated July 1, 2018, <https://www.wsj.com/articles/north-korea-expands-key-missile-manufacturing-plant-1530486907> (accessed May 25, 2021); Courtney Kube, Ken Dilanian, and Carol E. Lee, "North Korea Has Increased Nuclear Production at Secret Sites, Say U.S. Officials," NBC News, updated June 30, 2018, <https://www.nbcnews.com/news/north-korea/north-korea-has-increased-nuclear-production-secret-sites-say-u-n887926> (accessed May 25, 2021); Frank V. Pabian, Joseph S. Bermudez Jr., and Jack Liu, "Infrastructure Improvements at North Korea's Yongbyon Nuclear Research Facility," *38 North*, June 26, 2018, <https://www.38north.org/2018/06/yongbyon062618/> (accessed May 25, 2021); and Ankit Panda, "Exclusive: North Korea Has Continued Ballistic Missile Launcher Production in 2018, Per US Intelligence," *The Diplomat*, June 30, 2018, <https://thediplomat.com/2018/07/exclusive-north-korea-has-continued-ballistic-missile-launcher-production-per-us-intelligence/> (accessed May 25, 2021).
11. Daniel R. Coats, Director of National Intelligence, "Worldwide Threat Assessment of the US Intelligence Community," statement before the Select Committee on Intelligence, U.S. Senate, January 29, 2019, p. 8, <https://www.dni.gov/files/ODNI/documents/2019-ATA-SFR---SSCI.pdf> (accessed May 25, 2021).
12. South Korean Ministry of National Defense, *2020 Defense White Paper*, p. 24 (Korean-language version), https://www.mnd.go.kr/user/mnd/upload/pblictN/PBLICTNEBOOK_202102021153057640.pdf (accessed August 16, 2021). See also South Korean Ministry of National Defense, *2018 Defense White Paper*, p. 29 (English-language version), https://www.mnd.go.kr/user/mndEN/upload/pblictN/PBLICTNEBOOK_201908070153390840.pdf (accessed August 16, 2021).

13. South Korean Ministry of National Defense, *2020 Defense White Paper*, pp. 51–52 (Korean-language version). In 2018, total strength was 599,000: 464,000 for the Army, 70,000 for the Navy, and 65,000 for the Air Force. South Korean Ministry of National Defense, *2018 Defense White Paper*, pp. 55–58, 119, and 332 (English-language version).
14. Bruce Klingner, “Enhance South Korean Military Capabilities Before OPCON Transfer,” Heritage Foundation *Backgrounder* No. 3452, December 2, 2019, <https://www.heritage.org/asia/report/enhance-south-korean-military-capabilities-opcon-transfer>.
15. Jeong Yong-soo and Ser Myo-ja, “Kim Jong-un Ordered a Plan for a 7-day Asymmetric War: Officials,” *Korea JoongAng Daily*, January 7, 2015, <http://koreajoongangdaily.joins.com/news/article/Article.aspx?aid=2999392> (accessed May 25, 2021).
16. North Korea Leadership Watch, “Kim Jong Un Observes and Guides Ballistic Missile Drill,” July 19, 2016, <https://nkleadershipwatch.wordpress.com/2016/07/19/kim-jong-un-observes-and-guides-ballistic-missile-drill/> (accessed May 26, 2021); Shin Hyon-hee, “NK Says Missile Test Aimed at Ports, Airfields in South Korea,” *The Korea Herald*, July 20, 2016, <http://www.koreaherald.com/view.php?ud=20160720000876> (accessed May 26, 2021), and North Korea Leadership Watch, “Kim Jong Un Supervises Missile Drill,” March 6, 2017, <http://www.nkleadershipwatch.org/2017/03/06/kim-jong-un-supervises-missile-drill/> (accessed May 26, 2021).
17. “N. Korea Boosting Cyber Warfare Capabilities,” *The Chosun Ilbo*, November 5, 2013, http://english.chosun.com/site/data/html_dir/2013/11/05/2013110501790.html (accessed May 26, 2021).
18. Kong Ji Young, Lim Jong In, and Kim Kyoung Gon, “The All-Purpose Sword: North Korea’s Cyber Operations and Strategies,” in *2019 11th International Conference on Cyber Conflict: Silent Battle*, ed. T. Minárik, S. Alatalu, S. Biondi, M. Signoretti, I. Tolga, G. Visky, NATO CCD COE (Cooperative Cyber Defence Centre of Excellence) Publications, 2019, p. 143, https://ccdcoe.org/uploads/2019/06/CyCon_2019_BOOK.pdf (accessed May 26, 2021). The conference was held in Tallinn, Estonia, on May 28–31, 2019.

Non-State Actors

James Phillips and Jeff Smith

Terrorist groups come in many forms but have one thing in common: the use of violence to achieve their political objectives, whether those objectives are religious, ethnic, or ideological. In general, terrorist groups operate in a very local context, usually within a specific country or sub-region. Sometimes a terrorist group's objectives extend beyond the internationally recognized borders of a state because their identity as a group transcends such legal or geographic boundaries.

Terrorist groups rarely pose a threat to the United States that rises to the threshold used by this *Index*: a substantial threat to the U.S. homeland; the ability to precipitate a war in a region of critical interest to the U.S.; and/or the ability to threaten the free movement of people, goods, or services through the global commons. Those that do meet these criteria are assessed in this section, with the exception of Hezbollah and other Iran-backed groups.¹

Terrorist Threats to the Homeland from the Middle East and North Africa

Radical Islamist terrorism in its various forms remains a global threat to the safety of America's citizens. Many terrorist groups operate in the Middle East, but those that are inspired by Islamist ideology also operate in Europe, Asia, and Africa.

The primary terrorist groups of concern to the U.S. homeland and to Americans abroad are the Islamic State of Iraq and al-Sham (ISIS) and al-Qaeda. Their threat is amplified when they can exploit areas with weak or

nonexistent governance that allows them to plan, train, equip, and launch attacks.

Al-Qaeda and Its Affiliates. Al-Qaeda was founded in 1988 by Arab foreign fighters who flocked to Afghanistan to join the war against Soviet occupation of the country in the 1980s. With Osama bin Laden appointed emir, al-Qaeda was envisaged as a revolutionary vanguard that would radicalize and recruit Sunni Muslims across the world and lead a global Islamist revolution.²

After 9/11, al-Qaeda's leadership fled Afghanistan. Much of the original cadre has now been killed or captured, including Osama bin Laden, and other key al-Qaeda leaders have been killed by targeted strikes in Afghanistan, Iraq, Pakistan, Syria, Yemen, and Somalia. However, al-Qaeda's central leadership remains a potential threat to the U.S. homeland. Key elements of al-Qaeda's leadership have survived or been replaced. Bin Laden's successor as emir, Ayman al-Zawahiri, was forced deeper into seclusion and reportedly is sick or already dead from natural causes.³ Some al-Qaeda lieutenants are believed still to be in the Afghanistan-Pakistan region; others have taken refuge in Iran.⁴ Zawahiri's likely successor, Mohammed Salahuddin Zeidan, reportedly also is based in Iran, where he operates under the nom de guerre Saif al-Adel ("Sword of Justice").⁵

Like scores of other al-Qaeda members in Iran, Zeidan experienced imprisonment, some form of house arrest, and periods of relative freedom to operate inside Iran, depending

on the state of relations between Iran and al-Qaeda. Although both share common enemies in the United States, Israel, and Sunni Arab regimes, they represent clashing Shia and Sunni Islamist ideologies and pursue conflicting long-term goals in Iraq, Lebanon, Syria, and Yemen.

Iran's Islamic Revolutionary Guard Corps (IRGC) played an important role in establishing links with al-Qaeda in the early 1990s, when Bin Laden was based in Sudan. According to the report of the 9/11 Commission, the IRGC trained al-Qaeda members in camps in Lebanon and in Iran, where they learned to build much bigger bombs. The commission assessed that al-Qaeda may have assisted Iran-backed Saudi Hezbollah terrorists who executed the June 1996 bombing that killed 19 U.S. Air Force personnel at the Khobar Towers residential complex in Saudi Arabia and recommended that further investigation was needed to examine Iran's ties to al-Qaeda.⁶

This long-neglected issue resurfaced in 2020 after *The New York Times* reported that al-Qaeda's second-highest leader was killed in the heart of Iran's capital city on August 7, 2020, by Israeli agents at the behest of the United States.⁷ The al-Qaeda leader, Abdullah Ahmed Abdullah, who went by the nom de guerre Abu Muhammad al-Masri, had been living in Iran at least since 2003 when he had fled from Afghanistan. Abdullah was a longtime fixture on the FBI's "most wanted" list for his role in planning the August 7, 1998, bombings of the U.S. embassies in Kenya and Tanzania, which killed 224 people including 12 Americans. He was gunned down on a street in Tehran by two assassins on a motorcycle on the anniversary of that attack, which was al-Qaeda's most lethal operation before 9/11.⁸

On January 12, 2021, then-Secretary of State Mike Pompeo confirmed the *New York Times* report about Abdullah's death and warned that Iran had become the "new Afghanistan."⁹ He also announced sanctions on two al-Qaeda leaders that continue to operate inside Iran.

Al-Qaeda also dispersed its fighters further afield, allowing for the development of regional

affiliates that shared the long-term goals of al-Qaeda's general command and largely remained loyal to it. These affiliates have enjoyed some success in exploiting local conflicts. In particular, the Arab Spring uprisings that began in 2011 enabled al-Qaeda to advance its revolutionary agenda, taking advantage of failed or failing states in Iraq, Libya, Mali, Syria, and Yemen. It is through these affiliates that al-Qaeda is able to project regional strength most effectively.

Yemen. Yemen has long been a bastion of support for militant Islamism. Yemenis made up a disproportionate number of the estimated 25,000 foreign Muslims that fought in the Afghan jihad against the Soviet Union in the 1980s. After that conflict ended, Yemen also attracted Westerners into the country to carry out terrorist operations there. In 1998, several British citizens were jailed for planning to bomb Western targets, including hotels and a church.¹⁰

Al-Qaeda's first terrorist attack against Americans occurred in Yemen in December 1992 when a bomb was detonated in a hotel used by U.S. military personnel. In October 2000, in a much deadlier operation, it used a boat filled with explosives to attack the USS *Cole* in the port of Aden, killing 17 American sailors.¹¹ The first U.S. drone strike outside Afghanistan after 9/11 also took place in Yemen, targeting those connected to the attack on the *Cole*.¹²

After 9/11 and following crackdowns in other countries, Yemen became increasingly important as a base of operations for al-Qaeda. In September 2008, al-Qaeda launched an attack on the U.S. embassy in Yemen that killed 19 people, including an American woman. Yemen's importance to al-Qaeda increased further in January 2009 when al-Qaeda members who had been pushed out of Saudi Arabia merged with the Yemeni branch to form Al-Qaeda in the Arabian Peninsula (AQAP). This affiliate quickly emerged as one of the leading terrorist threats to the U.S. By 2010, CIA analysts assessed that AQAP posed a more urgent threat to U.S. security than the al-Qaeda general command based in Afghanistan/Pakistan.¹³

Much of this threat centered initially on AQAP's Anwar al-Awlaki, a charismatic American-born Yemeni cleric who directed several terrorist attacks on U.S. targets before being killed in a drone air strike in September 2011. He had an operational role in the plot executed by Umar Farouk Abdulmutallab, the failed suicide bomber who sought to destroy an airliner bound for Detroit on Christmas Day 2009.¹⁴ Awlaki was also tied to plots to poison food and water supplies, as well as to launch ricin and cyanide attacks,¹⁵ and is suspected of playing a role in the November 2010 plot to dispatch parcel bombs to the U.S. in cargo planes. Additionally, Awlaki was in contact with Major Nidal Hassan, who perpetrated the 2009 Fort Hood shootings that killed 13 soldiers.¹⁶

Since Awlaki's death, the number of AQAP-sanctioned external operations in the West has diminished.¹⁷ However, his videos on the Internet have continued to radicalize and recruit young Muslims, including the perpetrators of the April 2013 bombing of the Boston Marathon that killed three people.¹⁸

AQAP's threat to Western security, while seemingly slightly reduced by Awlaki's death, is still pronounced. Another attempt to carry out a bombing of Western aviation using explosives concealed in an operative's underwear was thwarted by a U.S.–Saudi intelligence operation in May 2012.¹⁹ In August 2013, U.S. interception of al-Qaeda communications led to the closure of 19 U.S. embassies and consulates across the Middle East and Africa because of indications that AQAP was planning a massive attack.²⁰ In January 2015, two AQAP-trained terrorists murdered staff members and nearby police at *Charlie Hebdo* magazine in Paris.²¹ In 2017, aviation was targeted once again by a plan to conceal bombs in laptop batteries.²²

AQAP launched another successful attack inside the United States on December 6, 2019, when a radicalized Saudi Royal Air Force officer being trained at Naval Air Station Pensacola killed three U.S. Navy sailors and wounded eight other Americans in a shooting attack. The FBI later assessed that the shooter, Mohammed Saeed Al-Shamrani, had been

radicalized by 2015 and was influenced by Awlaki's propaganda.²³

Much of AQAP's activity has focused on exploiting the chaos of the Arab Spring in Yemen. AQAP acquired a significant amount of territory in 2011 and established governance in the country's South, finally relinquishing this territory only after a Yemeni military offensive in the summer of 2012.²⁴

AQAP further intensified its domestic activities after the overthrow of Yemen's government by Iran-backed Houthi rebels in 2015, seizing the city of al-Mukalla and expanding its control of rural areas in southern Yemen. AQAP withdrew from al-Mukalla and other parts of the South in the spring of 2016, reportedly after the U.S.-backed Saudi–United Arab Emirates coalition had cut deals with AQAP, paying it to leave certain territory and even integrating some of its fighters into its own forces that were targeting the Houthis.²⁵

More substantive progress has been achieved in the targeting of AQAP's leadership. Said al-Shehri, a top AQAP operative, was killed in a drone strike in 2013. The group's leader at the time, Nasir al-Wuhayshi, was killed in a drone strike in June 2015. Perhaps most significantly, Ibrahim al-Asiri, AQAP's most notorious bomb maker, was killed in a U.S. strike in 2017. Since then, the tempo of U.S. drone strikes against AQAP has slowed.²⁶

In 2018, U.N. experts estimated that AQAP commanded between 6,000 and 7,000 fighters in 2018.²⁷ AQAP has declined since its 2015–2016 peak, losing key leaders to drone strikes and other attacks and suffering manpower losses in factional clashes and defections.²⁸ Nevertheless, it remains a resilient force that could capitalize on the anarchy of Yemen's multi-sided civil war to seize new territory and plan more attacks on the West.

Syria. Al-Qaeda's Syrian affiliate, initially named the al-Nusra Front (ANF), was established as an offshoot of the Islamic State of Iraq (ISI), al-Qaeda's Iraq affiliate, in late 2011 by Abu Muhammad al-Julani, a lieutenant of ISI leader Abu Bakr al-Baghdadi.²⁹ ANF had an estimated 5,000 to 10,000 members and

emerged as one of the top rebel groups fighting the Assad dictatorship in Syria.³⁰ Most ANF cadres are concentrated in rebel strongholds in northwestern Syria, but the group also has small cells operating elsewhere in the country.

ANF had some success in attracting Americans to its cause. An American Muslim recruited by ANF, Moner Mohammad Abusalha, conducted a suicide truck bombing in northern Syria on May 25, 2014, in the first reported suicide attack by an American in that country.³¹ At least five men have been arrested inside the U.S. for providing material assistance to ANF, including Abdirahman Sheik Mohamud, a naturalized U.S. citizen who was arrested in April 2015 after returning from training in Syria and was planning to launch a terrorist attack on U.S. soldiers based in Texas.³²

In recent years, the al-Qaeda network in Syria has undergone several name changes, allying itself with various Islamist rebel groups. This has made it more difficult to assess the degree of direct threat that it poses outside of Syria.

In a May 2015 interview, al-Julani stated that al-Nusra's intentions were purely local and that, "so as not to muddy the current war" in Syria, ANF was not planning to target the West.³³ In July 2016, al-Nusra rebranded itself as Jabhat Fatah Al Sham (JFS), and al-Julani stated that it would have "no affiliation to any external entity," a move that some experts regarded as a break from al-Qaeda and others regarded as a move to obscure its ties to al-Qaeda and reduce U.S. military pressure on the group.³⁴

In January 2017, ANF merged with other Islamist extremist movements to create a new anti-Assad coalition: Hayat Tahrir al-Sham (HTS, Organization for the Liberation of the Levant). It was estimated that HTS had 12,000 to 14,000 fighters in March 2017.³⁵ HTS suffered many casualties as Syria's Assad regime, backed by Iran and Russia, tightened the noose around its strongholds in northwest Syria. "Since 2017," according to the U.S. Department of State's 2019 *Country Reports on Terrorism*, "ANF has continued to operate through HTS

in pursuit of its objectives." The report further estimated that ANF's strength had fallen to "between 5,000 to 10,000 fighters."³⁶

Further complicating matters surrounding al-Qaeda's presence, another group in Syria connected to al-Qaeda, Hurras al-Din (Guardians of the Religion), was formed in March 2018.³⁷ Among its ranks were those who defected from HTS, and its suspected emir is an Ayman al-Zawahiri acolyte.³⁸

HTS is more pragmatic than its ultra-extremist parent organization and has cooperated with moderate Syrian rebel groups against the Assad regime, as well as against ISIS. However, the leadership of Abu Muhammad al-Julani and his tactical approach to the conflict, as well as the clear divisions within the Syrian jihad, have led to rebukes from Ayman al-Zawahiri and those who are loyal to him.³⁹ Zawahiri has stressed the need for unity while lambasting the jihadist movement in Syria and its emphasis on holding territory in northwest Syria at the expense of intensifying the struggle against Assad.⁴⁰

One entity that did pose a direct threat to the West was the Khorasan group, which was thought to comprise dozens of veterans of al-Qaeda's operations in Afghanistan and Pakistan.⁴¹ Al-Zawahiri had dispatched this cadre of operatives to Syria, where they were embedded with ANF and—despite al-Julani's statement that ANF was not targeting the West—charged with organizing terrorist attacks against Western targets. A series of U.S. air strikes in 2014–2015 degraded Khorasan's capacity to organize terrorist attacks.

Al-Qaeda's presence and activities in Syria, as well as the intent of those who once were aligned with it, are sometimes opaque, most likely on purpose. Even if offshoots of al-Qaeda are not currently emphasizing their hostility to the U.S., however, that will probably change if they succeed in further consolidating power in Syria.

The Sahel. Al-Qaeda in the Islamic Maghreb (AQIM) "has an estimated 1,000 fighters operating in the Sahel, including Algeria, northern Mali, southwest Libya, and Niger."⁴² AQIM's

roots lie in the Algerian civil war of the 1990s, when the Algerian government cancelled the second round of elections following the victory of the Islamic Salvation Front (FIS) in the first round. The armed wing of the FIS, the Armed Islamic Group (GIA), responded by launching a series of attacks, executing those who were even suspected of working with the state. The group also attempted to implement sharia law in Algeria.

The GIA rapidly alienated Algerian civilians, and by the late 1990s, an offshoot, the Salafist Group for Preaching and Combat (GSPC), emerged. Its violence, somewhat less indiscriminate than the GIA's, was focused on security and military targets. Having failed to overthrow the Algerian state, the GSPC began to align itself with al-Qaeda, and Ayman al-Zawahiri announced its integration into the al-Qaeda network in a September 2006 video. The GSPC subsequently took the AQIM name.

AQIM has carried out a series of regional attacks and has focused on kidnapping Westerners. Some of these hostages have been killed, but more have been used to extort ransoms from Western governments.⁴³ Like other al-Qaeda affiliates, AQIM also took advantage of the power vacuums that emerged from the Arab Spring, particularly in Libya where Islamist militias flourished. The weak central government was unable to tame fractious militias, curb tribal and political clashes, or dampen rising tensions between Arabs and Berbers in the West and Arabs and the Toubou tribe in the South.

The September 11, 2012, attack on the U.S. diplomatic mission in Benghazi underscored the extent to which Islamist extremism had flourished in the region. The radical Islamist group that launched the attack, Ansar al-Sharia, had links to AQIM and shared its violent ideology. AQIM and like-minded Islamist allies also grabbed significant amounts of territory in northern Mali late in 2012, implementing a brutal version of sharia law, until a French military intervention helped to push them back.

AQIM continues to support and work alongside various jihadist groups in the region. In

March 2017, the Sahara branch of AQIM merged with three other al-Qaeda or al-Qaeda-linked organizations based in the Sahel to form the Group for Support of Islam and Muslims (JNIM), an organization that has pledged allegiance to al-Qaeda emir Ayman al-Zawahiri.⁴⁴

AQIM is not known to have targeted the U.S. homeland explicitly in recent years, but it does threaten regional stability and U.S. allies in North Africa and Europe, where it has gained supporters and operates extensive networks for the smuggling of arms, drugs, and people.

The Islamic State of Iraq and al-Sham and Its Affiliates. The Islamic State of Iraq and al-Sham (ISIS) is an al-Qaeda splinter group that has outstripped its parent organization in terms of its immediate threats to U.S. national interests.

The Islamic State of Iraq (ISI), the precursor to ISIS and an al-Qaeda offshoot, was perceived by some Western policymakers as having been strategically defeated following the U.S. "surge" of 2006–2007 in Iraq. However, the group benefited from America's political and military withdrawal from Iraq in the 2010–2011 period, as well as from the chaos in Syria where the Arab Spring protests were met with bloody persecution from Bashar al-Assad.

In both Iraq and Syria, ISI had space in which to operate and a large disaffected pool of individuals from which to recruit. In April 2013, ISI emir Abu Bakr al-Baghdadi declared that the al-Nusra Front, the al-Qaeda affiliate operating in Syria, was merely a front for his operation and that a new organization was being formed: the Islamic State of Iraq and al-Sham. ISIS sought to establish an Islamic state governed by its harsh interpretation of sharia law, posing an existential threat to Christians, Shiite Muslims, Yazidis, and other religious minorities. Its long-term goals include leading a jihad to drive Western influence out of the Middle East; diminishing and discrediting Shia Islam, which it considers apostasy; and becoming the nucleus of a global Sunni Islamic empire.

With both al-Qaeda leader Ayman al-Zawahiri and ANF emir Abu Mohammed

al-Julani unable to rein in al-Baghdadi, ISIS was expelled from the al-Qaeda network in February 2014. Despite this, ISIS swept through parts of northern and western Iraq and in June 2014 declared the return of the caliphate, with its capital in the northern Syrian city of Raqqa. It subsequently kidnapped and then murdered Westerners working in Syria, including American citizens.

A U.S.-led international coalition was assembled to chip away at ISIS's control of territory. The Iraqi Army and Iranian-backed militias, supported by U.S. and coalition air strikes and special operations forces, liberated Mosul in July 2017. In Syria, U.S.-backed Syrian Democratic Forces militia liberated Raqqa in October 2017, and ISIS's last town (Baghouz) fell in March 2019.

ISIS fighters have dispersed, have adopted insurgent tactics, and will continue to pose a regional terrorist threat with direct implications for the U.S. In January 2019, for example, four American military and civilian personnel were killed in a suicide bombing at a market in Manbij in northern Syria.⁴⁵

On October 26, 2019, U.S. special operations forces killed ISIS leader al-Baghdadi in a raid in northwestern Syria's Idlib governate near the Turkish border.⁴⁶ ISIS soon named a successor, Abdullah Qardash, the nom de guerre of Mohammad Abdul Rahman al-Mawli al-Salbi. An Iraqi Turkman from Tal Afar near Mosul, Salbi is said to have met Baghdadi in Camp Bucca, a U.S. military detention center.⁴⁷

The number of ISIS attacks in Iraq and Syria fell from 776 during the first four months of 2019 to 330 during the same period in 2020.⁴⁸ Nevertheless, ISIS remains a significant regional threat. U.S. officials estimate that ISIS retains 14,000 to 18,000 militants in Syria and Iraq, where it is rebuilding its strength in remote desert and mountain regions.⁴⁹

Although ISIS's territorial control has been broken in Iraq and Syria, its presence has spread far beyond that territory. Terrorist groups around the world have pledged allegiance to Abu Bakr al-Baghdadi and his successor, and ISIS now has affiliates in the

Middle East, in South and Southeast Asia, and throughout Africa. ISIS poses a threat to stability in all of these regions, seeking to seize territory, overthrow governments, and impose its harsh brand of Islamic law.

Although the regional ISIS groups may not pose as great a threat to the U.S. homeland as the original group in Iraq and Syria posed, they represent significant threats to U.S. allies and U.S. forces deployed overseas. An Islamic State in the Greater Sahara ambush in Niger in October 2017, for example, resulted in the death of four U.S. special operations troops.⁵⁰ In addition, ISIS has made threats against embassies, including those of the U.S., in its areas of influence.⁵¹

ISIS poses an ongoing threat to life in the West. On May 3, 2015, for example, two American extremists in contact with an ISIS operative in Syria were fatally shot by police before they could commit mass murder in Garland, Texas.⁵²

More commonly, however, the ISIS ideology has inspired individuals and small groups to plan attacks in the U.S. According to the GW Extremism Tracker, "228 individuals have been charged in the U.S. on offenses related to the Islamic State...since March 2014, when the first arrests occurred."⁵³

Tashfeen Malik, one of the perpetrators of the December 2, 2015, shootings that killed 14 people in San Bernardino, California, pledged allegiance to al-Baghdadi.⁵⁴ ISIS also claimed responsibility for the June 12, 2016, shootings at a nightclub in Orlando, Florida, that killed 49 people. Omar Mateen, the perpetrator, had pledged allegiance to al-Baghdadi, although there is no evidence to show that the attacks were directed by ISIS.⁵⁵ The group also claimed responsibility for the October 31, 2017, vehicular attack by Sayfullo Saipov in New York that killed eight.⁵⁶ Saipov, too, had pledged allegiance to ISIS's emir but did not appear to be operationally guided by ISIS.⁵⁷ Such terrorist attacks, incited but not directed by ISIS, are likely to continue for the foreseeable future.

Although its appeal appears to have diminished since the fall of its caliphate in Iraq and Syria, ISIS continues to attract support from

self-radicalized Americans. For example, in April 2021, two men were arrested for attempting to provide material support to ISIS. One received a prison term for providing material support, and one received a prison term for the December 2017 bombing of a New York City subway.⁵⁸

ISIS has also attempted complex attacks on aviation. It claimed responsibility for the October 31, 2015, downing of a Russian passenger jet over Egypt's Sinai Peninsula that killed 224 people and also tried to bring down a flight heading from Sydney, Australia, to Abu Dhabi by concealing an explosive device inside a meat grinder.⁵⁹

ISIS had well-publicized success in attracting the support of foreign fighters. Approximately 250 from the U.S. traveled or attempted to travel to Syria.⁶⁰ These individuals, who are likely to have received military training, could well pose an ongoing threat upon their return to the U.S. by involving themselves in attack planning or by helping to recruit future generations of jihadists.

ISIS had greater success attracting recruits from Europe, with approximately 6,000 departing from European countries.⁶¹ The return of foreign fighters to Europe has led to several attacks. Mehdi Nemmouche, a French citizen of Algerian origin who shot and killed four civilians at the Jewish Museum in Brussels in May 2014, for example, was an ISIS-aligned terrorist who had fought in Syria.⁶² In August 2015, Ayoub el-Khazzani, a Moroccan, attempted to gun down passengers in a train travelling between Amsterdam and Paris. Passengers, including two members of the U.S. Army, foiled the attack and restrained him.⁶³

Similarly, a group of ISIS foreign fighters teamed with local Islamist terrorists in France to launch a series of suicide and gun attacks on a music venue, restaurants, cafes, and a football stadium, killing 130 and injuring 368 people in Paris in November 2015.⁶⁴ Recruits from within the same network then killed 32 people and injured around 300 more in shootings and suicide bombings across Brussels, Belgium, in March 2016.⁶⁵

ISIS ideology has also inspired a wave of vehicle and knife attacks in Europe, including one carried out by a Tunisian who used a truck to kill 86 people and injure 434 more at a Bastille Day celebration in Nice, France, in July 2016.⁶⁶ In another such attack, in June 2017, three men killed eight people and injured 47 on or near London Bridge in London, England, by running over them or stabbing them.⁶⁷ London Bridge also was the site of a November 29, 2019, knife attack by an ISIS supporter who killed two people and wounded three more before being killed by police.⁶⁸

ISIS has demonstrated an interest in carrying out biological attacks. Sief Allah H., a Tunisian asylum seeker who was in contact with ISIS, and his German wife Yasmin H. were arrested in Cologne in June 2018 after they had produced ricin as part of a suspected attack.⁶⁹ This was the first time that ricin had been successfully produced in the West as part of an alleged Islamist plot.

Overall, as of May 2019, ISIS had had some involvement—ranging from merely inspirational to hands-on and operational—in over 150 plots and attacks in Europe since January 2014 that had led to 371 deaths and more than 1,700 injuries.⁷⁰ This includes the loss of American lives abroad. An American college student was killed in Paris in November 2015, four Americans were killed in the Brussels attack of March 2016, and another three were killed in the Nice attack of July 2016.⁷¹ Moreover, the threat is by no means confined to Europe: Americans were also killed in ISIS-claimed attacks in Tajikistan in July 2018 and Sri Lanka in April 2019.⁷²

Terrorist Groups Operating in Afghanistan and Pakistan (Af-Pak)

According to General John W. Nicholson, former Commander of U.S. Forces–Afghanistan, “Of the 98 U.S.-designated terrorist organizations globally, 20 are located in the Afghanistan–Pakistan region. This constitutes the highest concentration of terrorist groups anywhere in the world...”⁷³

A wide variety of Islamist terrorist groups operate from Pakistani territory, many with

the support or sanction of the Pakistani state. Pakistan's military and intelligence leaders maintain a short-term tactical approach of fighting some terrorist groups that are deemed a threat to the state while supporting others that are aligned with Pakistan's goal of extending its influence and curbing India's.

Pakistan's Inter-Services Intelligence (ISI) views terrorist proxies as an extension of Pakistan's foreign policy, and many of these groups advance Pakistan's interests by launching attacks in Afghanistan, Kashmir, or other parts of India.

Some Islamist terrorist groups operating in Pakistan target non-Muslims and Muslim minorities deemed un-Islamic. A smaller number of anti-state terrorist outfits, like the "Pakistani Taliban" or TTP, have targeted Pakistani security forces, though their capabilities have been degraded in recent years by Pakistani military operations.⁷⁴

In 2015, after a series of terrorist attacks against Pakistan's state and security services, the government introduced a National Action Plan (NAP) to reinvigorate the country's fight against terrorism. Pakistani military operations against TTP hideouts in North Waziristan helped to reduce Pakistan's internal terrorist threat to some degree. According to the India-based South Asia Terrorism Portal, total fatalities in Pakistan (including terrorists/insurgents) have mostly been declining steadily since 2009.⁷⁵

However, there are few signs that Pakistan's crackdown on terrorism extends to groups that target India such as Lashkar-e-Taiba (LeT), which was responsible for the 2008 Mumbai attacks, and Jaish-e-Mohammed (JeM), which carried out an attack on the Indian parliament in 2001, another on the airbase at Pathankot in 2016, and the deadliest attack on Indian security forces in Kashmir in February 2019.⁷⁶ Pakistani military and intelligence officials also maintain close links to the Taliban and the Haqqani Network.

The Haqqani Network, which operates out of Pakistan's tribal areas, has enjoyed close links to Pakistan's ISI since the 1970s. After

the U.S. invasion of Afghanistan in 2001, the Haqqani Network launched some of the deadliest and most devastating attacks on U.S. forces in Afghanistan. These attacks include a December 2009 bombing of a CIA outpost in Khost, the deadliest attack on the CIA in the agency's history, and two brazen assaults in 2011, including an attack on a U.S. military base in Wardak that injured 77 soldiers and an attack on the U.S. embassy that resulted in a 20-hour gun battle. Former Chairman of the Joint Chiefs of Staff Admiral Mike Mullen has described the Haqqani Network as a "veritable arm" of Pakistan's ISI.⁷⁷ The Haqqani Network maintains close links to al-Qaeda, and its operational leader, Sirajuddin Haqqani, was named Interior Minister in the Taliban's new government in Afghanistan in August 2021.⁷⁸

The threat posed by al-Qaeda in Afghanistan and Pakistan diminished somewhat after the U.S. invasion of Afghanistan in 2001 and the killing of Osama bin Laden at his hideout in Abbottabad, Pakistan, in May 2011. It was further degraded by an intensive drone campaign in Pakistan's tribal areas in the 2010s. Nevertheless, al-Qaeda still maintains a presence in the region and could experience a resurgence with the Taliban takeover of Afghanistan, given the group's close links to both the Haqqani Network and the Taliban. A 2020 report by the U.S. Treasury Department concluded that "as of 2020, al-Qaeda is gaining strength in Afghanistan while continuing to operate with the Taliban under the Taliban's protection. Senior Haqqani Network figures have discussed forming a new joint unit of armed fighters in cooperation with and funded by al-Qaeda."⁷⁹

A local affiliate of ISIS, the so-called Islamic State-Khorasan (IS-K), emerged in Afghanistan and Pakistan in 2014–2015, drawing from disaffected members of the Afghan Taliban and TTP. Though its actual numbers remain modest, its high-profile, high-casualty terrorist attacks have helped it to attract followers. In March 2019, General Joseph Votel, the head of CENTCOM, said that he believed "ISIS Khorasan does have ideations focused on external operations toward our homeland."⁸⁰

Experts believe that there is little coordination between the IS branch operating in Afghanistan and the central command structure located in the Middle East. Instead, the branch draws recruits from disaffected members of the Pakistani Taliban and other radicalized Afghans and has frequently found itself at odds with the Afghan Taliban, which views IS-K as a direct competitor for financial resources, recruits, and ideological influence. U.S. officials acknowledge that even though they were not coordinating directly, U.S. air strikes and Taliban ground attacks substantially degraded IS-K capabilities in the late 2010s.⁸¹

The lack of publicly available information and the willingness of local fighters in the region to change allegiances make it difficult to know the exact number of IS-K fighters in Afghanistan at any given time. In September 2019, U.S. officials estimated that there were between 2,000 and 5,000 ISIS fighters in Afghanistan.⁸² A series of major defeats in 2019 led to IS-K's "collapse" in eastern Afghanistan, according to U.S. officials.⁸³ Since then, it appears to have changed strategies—for example, by pursuing a rapprochement with the ISI and Haqqani Network—even as it continues to battle the Afghan Taliban.⁸⁴

Finally, the U.S. withdrawal from Afghanistan in August 2021 and the Afghan Taliban's rapid takeover of the country have raised concerns that Afghanistan will once again become a safe haven for international terrorist groups, including al-Qaeda. Of particular concern is the fact that on August 19, a senior member of the Haqqani Network was put in charge of security in Kabul.⁸⁵ One week later, a suicide bomber launched an attack on the Kabul airport that killed 13 U.S. military personnel and over 150 Afghans.⁸⁶ The Biden Administration blamed IS-K, which took responsibility for the attack, and launched two drone strikes on IS-K targets in the week following the airport attack.⁸⁷

Conclusion

ISIS has lost its so-called caliphate, but it remains a highly dangerous adversary capable

of planning and executing attacks regionally and—at the very least—inspiring them in the West. It has transitioned from a quasi-state to an insurgency, relying on its affiliates to project strength far beyond its former Syrian and Iraqi strongholds.

Meanwhile, despite sustained losses in leadership, al-Qaeda remains resilient. It has curried favor with other Sunnis in particular areas of strategic importance to it, has focused its resources on local conflicts, has occasionally controlled territory, and has deemphasized (but not eschewed) focus on the global jihad. This approach has been particularly noticeable since the Arab Spring.

Regardless of any short-term tactical considerations, both groups ultimately aspire to attack the U.S. at home and U.S. interests abroad. While the U.S. has hardened its domestic defenses, both ISIS and al-Qaeda can rely on radicalized individuals living within the U.S. to take up the slack. Furthermore, as has been demonstrated time and again, there are ample opportunities to target Americans overseas in countries that are more vulnerable to terrorist attack. If it wishes to contain and ultimately end Islamist violence, the U.S. must continue to bring effective pressure to bear on these groups and those that support them.

The terrorist threat to the U.S. homeland from Afghanistan and Pakistan remains real and uncertain in a rapidly shifting landscape that is home to a wide variety of extremist and terrorist groups. On one hand, the capabilities of al-Qaeda, the terrorist group that is most directly focused on attacking the U.S. homeland, have been degraded since the U.S. invasion of Afghanistan in 2001. On the other hand, the U.S. withdrawal from Afghanistan and the Taliban's rapid takeover of the country, as well as its ongoing links to the Haqqani Network, al-Qaeda, and other terrorist groups, are serious causes for concern.

In its interim peace agreement with the U.S., the Taliban ostensibly committed to preventing Afghan soil from being used to launch attacks against the U.S. homeland. However, experts remain skeptical of these commitments.

The Pakistani state, meanwhile, continues to harbor and support a vibrant ecosystem of terrorist groups within its borders, creating a volatile situation even as it seeks to dissuade loyal militant organizations from attacking the U.S. for fear of blowback.

This *Index* assesses the threat from ISIS, al-Qaeda, and their affiliated organizations as “aggressive” for level of provocation of behavior and “capable” for level of capability.

Threats: Non-State Actors

	HOSTILE	AGGRESSIVE	TESTING	ASSERTIVE	BENIGN
Behavior		✓			

	FORMIDABLE	GATHERING	CAPABLE	ASPIRATIONAL	MARGINAL
Capability			✓		

Endnotes

1. See “Iran,” *infra*.
2. Peter L. Bergen, *The Osama bin Laden I Know: An Oral History of al Qaeda’s Leader* (New York: Free Press, 2006), pp. 82–83.
3. Daniel L. Byman, “The Death of Ayman al-Zawahri and the Future of al-Qaida,” The Brookings Institution, Order from Chaos blog, November 17, 2020, <https://www.brookings.edu/blog/order-from-chaos/2020/11/17/the-death-of-ayman-al-zawahri-and-the-future-of-al-qaida/> (accessed June 28, 2021).
4. See, for example, United Nations Security Council, *Twenty-Second Report of the Analytical Support and Sanctions Monitoring Team Submitted Pursuant to Resolution 2368 (2017) Concerning ISIL (Da’esh), Al-Qaida and Associated Individuals and Entities*, S/2018/705, July 27, 2018, pp. 15 and 18, https://www.un.org/en/ga/search/view_doc.asp?symbol=S/2018/705&referer=/english/&Lang=E (accessed June 28, 2021).
5. Ali Soufan, “Al-Qa`ida’s Soon-to-Be Third Emir? A Profile of Saif al-`Adl,” Combating Terrorism Center at West Point, *CTC Sentinel*, Vol. 14, Issue 2 (February 2021), pp. 1–21, <https://ctc.usma.edu/wp-content/uploads/2021/02/CTC-SENTINEL-022021.pdf> (accessed June 28, 2021).
6. National Commission on Terrorist Attacks Upon the United States, *The 9/11 Commission Report*, released July 22, 2004, pp. 60 and 61, <https://govinfo.library.unt.edu/911/report/911Report.pdf> (accessed June 28, 2021). For the undated report’s official release date, see media advisory, “9-11 Commission Releases Unanimous Final Report,” National Commission on Terrorist Attacks Upon the United States, July 22, 2004, https://govinfo.library.unt.edu/911/press/pr_2004-07-22.pdf (accessed June 29, 2021). For transcripts of the commission’s 12 public hearings, see National Commission on Terrorist Attacks Upon the United States, “Hearings: Public Hearings of the National Commission on Terrorist Attacks Upon the United States,” <https://govinfo.library.unt.edu/911/hearings/index.htm> (accessed June 29, 2021).
7. Adam Goldman, Eric Schmitt, Farnaz Fassihi, and Ronen Bergman, “Al Qaeda’s No. 2, Accused in U.S. Embassy Attacks, Was Killed in Iran,” *The New York Times*, updated November 27, 2020, <https://www.nytimes.com/2020/11/13/world/middleeast/al-masri-abdullah-qaeda-dead.html> (accessed June 28, 2021).
8. James Phillips, “Why Was Iran Hiding Al Qaeda’s No. 2 in Tehran?” *The National Interest*, The Buzz Blog, November 20, 2020, <https://nationalinterest.org/blog/buzz/why-was-iran-hiding-al-qaeda%E2%80%99s-no-2-tehran-173064> (accessed June 28, 2021).
9. Michael Gordon, “Pompeo Accuses Iran of Allowing al Qaeda to Set up Headquarters,” *The Wall Street Journal*, updated January 12, 2021, <https://www.wsj.com/articles/pompeo-accuses-iran-of-allowing-al-qaeda-to-set-up-headquarters-11610469984> (accessed June 28, 2021).
10. BBC News, “Britons Convicted of Yemen Bomb Plot,” August 9, 1999, http://news.bbc.co.uk/2/hi/middle_east/415096.stm (accessed June 28, 2021).
11. James Phillips, “The Yemen Bombing: Another Wake-up Call in the Terrorist Shadow War,” Heritage Foundation *Executive Memorandum* No. 703, October 25, 2000, <http://www.heritage.org/middle-east/report/the-yemen-bombing-another-wake-call-the-terrorist-shadow-war>.
12. CNN, “Sources: U.S. Kills Cole Suspect,” November 5, 2002, <http://www.cnn.com/2002/WORLD/meast/11/04/yemen.blast/index.html> (accessed June 28, 2021).
13. Greg Miller, “CIA Sees Increased Threat in Yemen,” *The Washington Post*, August 25, 2010, <https://www.washingtonpost.com/wp-dyn/content/article/2010/08/24/AR2010082406763.html> (accessed June 28, 2021).
14. Jeremy Pelofsky, “Prosecutors Say al Qaeda Leader Awlaki Directed Underwear Bomber,” Reuters, February 10, 2012, <https://www.reuters.com/article/us-usa-security-abdulmutallab/prosecutors-say-al-qaeda-leader-awlaki-directed-underwear-bomber-idUSTRE8191VL20120210> (accessed June 29, 2021).
15. Daniel Klaidman, *Kill or Capture: The War on Terror and the Soul of the Obama Presidency* (New York: Houghton Mifflin Harcourt, 2012), p. 216.
16. Mark Schone and Rehab el-Buri, “Fort Hood: Hasan Asked Awlaki If It Was Okay to Kill American Soldiers,” ABC News, December 23, 2009, <https://abcnews.go.com/Blotter/FtHoodInvestigation/fort-hood-hasan-asked-awlaki-kill-american-soldiers/story?id=9410718> (accessed June 29, 2021).
17. For more on the potential decline of AQAP’s external operations program, see Gregory D. Johnsen, “The Two Faces of Al-Qaeda in the Arabian Peninsula,” *War on the Rocks*, October 11, 2018, <https://warontherocks.com/2018/10/the-two-faces-of-al-qaeda-in-the-arabian-peninsula/> (accessed June 29, 2021).
18. Scott Shane, “The Enduring Influence of Anwar al-Awlaki in the Age of the Islamic State,” Combating Terrorism Center at West Point, *CTC Sentinel*, Vol. 9, Issue 7 (July 2016), pp. 15–19, https://ctc.usma.edu/app/uploads/2016/08/CTC-SENTINEL_Vol9Iss710.pdf (accessed June 29, 2021).

19. BBC News, "Al-Qaeda Yemen Plane Bomb Plot Foiled by 'Insider,'" May 8, 2012, <https://www.bbc.com/news/world-us-canada-17994493> (accessed June 29, 2021).
20. CBS News, "Yemen Terror Threat Prompts State Department to Evacuate Some Embassy Staff, Warn Americans to Leave Country 'Immediately,'" August 6, 2013, <https://www.cbsnews.com/news/yemen-terror-threat-prompts-state-department-to-evacuate-some-embassy-staff-warn-americans-to-leave-country-immediately/> (accessed June 29, 2021).
21. Thomas Joscelyn, "Al Qaeda in the Arabian Peninsula Claims Responsibility for Charlie Hebdo Attack," Foundation for Defense of Democracies *Long War Journal*, January 14, 2015, https://www.longwarjournal.org/archives/2015/01/al_qaeda_in_the_arab_2.php (accessed June 29, 2021).
22. Barbara Starr and Rene Marsh, "AQAP Trying to Hide Explosives in Laptop Batteries, Official Says," CNN, updated March 22, 2017, <https://www.cnn.com/2017/03/21/politics/electronics-ban-devices-explosives-intelligence/index.html> (accessed June 29, 2021).
23. Thomas Joscelyn, "The Naval Air Station Pensacola Shooter Shows That Al-Qaeda Is Still a Significant Threat," *The Dispatch*, May 20, 2020, <https://vitalinterests.thedispatch.com/p/the-naval-air-station-pensacola-shooter> (accessed June 29, 2021).
24. Robin Simcox, "Ansar al-Sharia and Governance in Southern Yemen," Hudson Institute, Center on Islam, Democracy, and the Future of the Muslim World, *Current Trends in Islamist Ideology*, Vol. 14 (January 2013), pp. 58–72, https://www.hudson.org/content/researchattachments/attachment/1145/20130124_ct14final.pdf (accessed June 30, 2021).
25. Maggie Michael, Trish Wilson, and Lee Keath, "AP Investigation: US Allies, al-Qaida Battle Rebels in Yemen," Associated Press, August 6, 2018, <https://apnews.com/f38788a561d74ca78c77cb43612d50da> (accessed June 30, 2021).
26. Bill Roggio, "US Targets AQAP 8 Times in Past 3 Months," Foundation for Defense of Democracies *Long War Journal*, April 2, 2019, <https://www.longwarjournal.org/archives/2019/04/us-targets-aqap-8-times-in-past-3-months.php> (accessed June 30, 2021).
27. United Nations Security Council, *Twenty-Second Report of the Analytical Support and Sanctions Monitoring Team*, p. 9.
28. Elisabeth Kendall, "Death of AQAP Leader Shows the Group's Fragmentation—and Durability," Washington Institute for Near East Policy, *PolicyWatch* No. 3263, February 14, 2020, <https://www.washingtoninstitute.org/policy-analysis/death-aqap-leader-shows-groups-fragmentation-and-durability> (accessed June 30, 2021).
29. U.S. Department of State, Bureau of Counterterrorism, *Country Reports on Terrorism 2017*, September 2018, pp. 320–321, https://www.state.gov/wp-content/uploads/2019/04/crt_2017.pdf (accessed June 30, 2021).
30. Eric Schmitt, "Al Qaeda Turns to Syria, with a Plan to Challenge ISIS," *The New York Times*, May 15, 2016, http://www.nytimes.com/2016/05/16/world/middleeast/al-qaeda-turns-to-syria-with-a-plan-to-challenge-isis.html?_r=0 (accessed June 30, 2021).
31. Adam Goldman, Greg Miller, and Nicole Rodriguez, "American Who Killed Himself in Syria Suicide Attack Was from South Florida," *The Washington Post*, May 31, 2014, http://www.washingtonpost.com/world/national-security/american-who-killed-himself-in-syria-suicide-attack-was-from-south-florida-official-says/2014/05/30/03869b6e-e7f4-11e3-a86b-362fd5443d19_story.html (accessed June 30, 2021).
32. Adam Goldman, "Ohio Man Who Trained with Jabhat al-Nusra Is Indicted on Terrorism Charges," *The Washington Post*, April 16, 2015, http://www.washingtonpost.com/world/national-security/ohio-man-who-trained-with-jabhat-al-nusra-is-indicted-on-terrorism-charges/2015/04/16/8e8ded08-e455-11e4-b510-962fcabc310_story.html (accessed June 30, 2021).
33. Agence France-Presse, "Chief of Al-Qaeda's Syria Affiliate Pledges No Attacks on the West," May 27, 2015, <https://www.yahoo.com/news/chief-al-qaedas-syria-affiliate-pledges-no-attacks-221912033.html?ref=gs> (accessed June 30, 2021).
34. Thomas Joscelyn, "Analysis: Al Nusrah Front Rebrands Itself as Jabhat Fath Al Sham," Foundation for Defense of Democracies *Long War Journal*, July 28, 2016, <https://www.longwarjournal.org/archives/2016/07/analysis-al-nusrah-front-rebrands-itself-as-jabhat-fath-al-sham.php> (accessed June 30, 2021).
35. Charles Lister, "Al Qaeda Is Starting to Swallow the Syrian Opposition," *Foreign Policy*, March 15, 2017, <http://foreignpolicy.com/2017/03/15/al-qaeda-is-swallowing-the-syrian-opposition/> (accessed June 30, 2021).
36. U.S. Department of State, Bureau of Counterterrorism, *Country Reports on Terrorism 2019*, released June 24, 2020, p. 287, <https://www.state.gov/wp-content/uploads/2020/06/Country-Reports-on-Terrorism-2019-2.pdf> (accessed June 30, 2021).
37. Thomas Joscelyn, "Jihadists Form 'Guardians of the Religion' Organization in Syria," Foundation for Defense of Democracies *Long War Journal*, March 4, 2018, <https://www.longwarjournal.org/archives/2018/03/jihadists-form-guardians-of-the-religion-organization-in-syria.php> (accessed June 30, 2021).
38. Thomas Joscelyn, "2 al Qaeda Leaders Reject Proposed Military Council in Syria," Foundation for Defense of Democracies *Long War Journal*, January 30, 2019, <https://www.longwarjournal.org/archives/2019/01/2-al-qaeda-leaders-reject-proposed-military-council-in-syria.php> (accessed June 30, 2021).

39. Thomas Joscelyn, "Analysis: Ayman al Zawahiri Calls for 'Unity' in Syria amid Leadership Crisis," Foundation for Defense of Democracies *Long War Journal*, December 2, 2017, <https://www.longwarjournal.org/archives/2017/12/analysis-ayman-al-zawahiri-calls-for-unity-in-syria-amid-leadership-crisis.php> (accessed June 30, 2021).
40. Thomas Joscelyn, "Zawahiri Criticizes Jihadists in Syria for Clinging to Territory Under Turkey's Protection," Foundation for Defense of Democracies *Long War Journal*, February 7, 2019, <https://www.longwarjournal.org/archives/2019/02/zawahiri-criticizes-jihadists-in-syria-for-clinging-to-territory-under-turkeys-protection.php> (accessed June 30, 2021).
41. James Phillips, "The Rise of Al-Qaeda's Khorasan Group: What It Means for U.S. National Security," Heritage Foundation *Issue Brief* No. 4281, October 6, 2014, <http://www.heritage.org/middle-east/report/the-rise-al-qaedas-khorasan-group-what-it-means-us-national-security>.
42. U.S. Department of State, Bureau of Counterterrorism, *Country Reports on Terrorism 2019*, p. 293.
43. Raissa Kasolowsky and Kate Kelland, "Al Qaeda Kills British Hostage in Mali," Reuters, June 3, 2009, <https://www.reuters.com/article/us-qaeda-hostage/al-qaeda-kills-british-hostage-in-mali-idUSTRE552IH020090603> (accessed June 30, 2021), and U.S. Department of State, Bureau of Counterterrorism, *Country Reports on Terrorism 2017*, p. 329.
44. Thomas Joscelyn, "Analysis: Al Qaeda Groups Reorganize in West Africa," Foundation for Defense of Democracies *Long War Journal*, March 13, 2017, <https://www.longwarjournal.org/archives/2017/03/analysis-al-qaeda-groups-reorganize-in-west-africa.php> (accessed June 30, 2021).
45. BBC News, "Syria War: 'IS Suicide Bomber' Kills US Troops in Manbij," January 16, 2019, <https://www.bbc.com/news/world-middle-east-46892118> (accessed June 30, 2021).
46. Shawn Snow, "CENTCOM Commander Releases Video of Raid on Baghdadi Compound, Which Now Looks like a 'Parking Lot with Large Potholes,'" *Military Times*, October 30, 2019, <https://www.militarytimes.com/news/your-military/2019/10/30/centcom-commander-releases-video-of-raid-on-baghdadi-compound-which-now-looks-like-a-parking-lot-with-large-potholes/> (accessed June 30, 2021).
47. Ibrahim al-Marashi, "The Turkmen Connection to Islamic State's New Leader," Middle East Eye, January 28, 2020, <https://www.middleeasteye.net/opinion/turkmen-connection-baghdadis-successor> (accessed June 30, 2021).
48. Jeff Seldin, "Data on Islamic State Attacks Could Be Masking Growing Problem, Some Fear," Voice of America, updated May 13, 2020, <https://www.voanews.com/middle-east/data-islamic-state-attacks-could-be-masking-growing-problem-some-fear> (accessed June 30, 2021).
49. U.S. Department of Defense, Office of Inspector General; U.S. Department of State, Office of Inspector General; and U.S. Agency for International Development, Office of Inspector General, *Operation Inherent Resolve: Lead Inspector General Report to the United States Congress*, January 1, 2020–March 31, 2020, p. 4, https://media.defense.gov/2020/May/13/2002298979/-1/-1/1/LIG_OIR_Q2_MAR2020_GOLD_508_0513.PDF (accessed June 30, 2021).
50. Carley Petesch, "Niger May Have Arrested Militant with Ties to US Ambush," Associated Press, April 17, 2018, <https://apnews.com/d4d1fc42f3241008227146f7b6db883> (accessed June 30, 2021).
51. Ryan Browne and Jennifer Hansler, "ISIS Threat Shuttters US Embassy in Democratic Republic of the Congo for More than a Week," CNN, updated December 3, 2018, <https://www.cnn.com/2018/12/03/politics/isis-threat-us-embassy-drc/index.html> (accessed June 30, 2021).
52. Nafees Hamid, "The British Hacker Who Became the Islamic State's Chief Terror Cybercoach: A Profile of Junaid Hussain," Combating Terrorism Center at West Point, *CTC Sentinel*, Vol. 11, Issue 4 (April 2018), pp. 30–37, <https://ctc.usma.edu/app/uploads/2018/04/CTC-SENTINEL-042018-3.pdf> (accessed June 30, 2021).
53. George Washington, University Program on Extremism, and University of Nebraska Omaha, National Counterterrorism Innovation, Technology, and Education Center (NCITE), "GW Extremism Tracker: Terrorism in the United States."
54. Laura Wagner and Bill Chappell, "FBI: San Bernardino Shooting Is Being Investigated as a Terrorist Act," NPR, December 4, 2015, <https://www.npr.org/sections/thetwo-way/2015/12/04/458464907/alleged-san-bernardino-attacker-pledged-allegiance-to-isis> (accessed June 30, 2021).
55. Thomas Joscelyn, "Orlando Terrorist Swore Allegiance to Islamic State's Abu Bakr al Baghdadi," Foundation for Defense of Democracies *Long War Journal*, June 20, 2016, <https://www.longwarjournal.org/archives/2016/06/orlando-terrorist-swore-allegiance-to-islamic-states-abu-bakr-al-baghdadi.php> (accessed June 30, 2021).
56. Peter Martinez, "ISIS Claims Responsibility for New York City Terror Attack that Killed 8," CBS News, November 2, 2017, <https://www.cbsnews.com/news/new-york-city-terror-attack-isis-claims-responsibility/> (accessed June 30, 2021).

57. Jeremy B. White, "New York Truck Attack Suspect 'Left Note Pledging Allegiance to Isis,'" *The Independent*, November 1, 2017, <https://www.independent.co.uk/news/world/americas/new-york-truck-attack-isis-suspect-sayfullo-saipov-a8030541.html> (accessed June 30, 2021).
58. George Washington University, Program on Extremism, and University of Nebraska Omaha, National Counterterrorism Innovation, Technology, and Education Center (NCITE), "GW Extremism Tracker: Terrorism in the United States."
59. Reuters, "Islamic State Claims Responsibility for Egypt's Sinai Attack," August 26, 2018, <https://www.reuters.com/article/us-egypt-security/islamic-state-claims-responsibility-for-egypts-sinai-attack-idUSKCN1LB090> (accessed June 30, 2021), and ABC [Australian Broadcasting Corporation] News, "Sydney Terror Plot: Lebanon Says It Helped Australia Foil Plane Bomb Plan Linked to Raids," updated August 21, 2017, <https://www.abc.net.au/news/2017-08-22/lebanon-says-it-helped-foil-the-sydney-plane-bomb-plot/8829234> (accessed June 30, 2021).
60. Lisa Curtis, Luke Coffey, David Inserra, Daniel Kochis, Walter Lohman, Joshua Meservey, James Phillips, and Robin Simcox, "Combating the ISIS Foreign Fighter Pipeline: A Global Approach," Heritage Foundation *Special Report* No. 180, January 6, 2016, <https://www.heritage.org/middle-east/report/combating-the-isis-foreign-fighter-pipeline-global-approach>.
61. Agence France-Presse, "More than 6,000 Have Left Europe for Isis Jihad: EU," *The Local*, April 13, 2015, <https://www.thelocal.de/20150413/up-to-6000-europeans-fighting-for-islamic-groups-isis-syria-iraq> (accessed June 30, 2021).
62. BBC News, "Brussels Jewish Museum Murders: Mehdi Nemmouche Jailed for Life," March 12, 2019, <https://www.bbc.co.uk/news/world-europe-47535333> (accessed June 30, 2021).
63. Paul Cruickshank, "Train Attack Suspect Confesses After Revelations in Academic Journal," CNN, updated December 19, 2016, <https://edition.cnn.com/2016/12/19/europe/isis-train-attack-suspect-confession/index.html> (accessed June 30, 2021).
64. BBC News, "Paris Attacks: What Happened on the Night," December 9, 2015, <https://www.bbc.co.uk/news/world-europe-34818994> (accessed June 30, 2021).
65. Jennifer Rankin and Jon Henley, "Islamic State Claims Attacks at Brussels Airport and Metro Station," *The Guardian*, March 22, 2016, <https://www.theguardian.com/world/2016/mar/22/brussels-airport-explosions-heard> (accessed June 30, 2021).
66. BBC News, "Nice Attack: What We Know About the Bastille Day Killings," August 19, 2016, <https://www.bbc.com/news/world-europe-36801671> (accessed June 30, 2021).
67. BBC News, "London Bridge Attack: What Happened," May 3, 2019, <https://www.bbc.co.uk/news/uk-england-london-40147164> (accessed June 30, 2021).
68. Calla Wahlquist, Kevin Rawlinson, and Matthew Weaver, "London Bridge Attacker Named as Usman Khan, 28—as It Happened," *The Guardian*, updated November 30, 2019, <https://www.theguardian.com/uk-news/live/2019/nov/29/london-bridge-incident-police-city> (accessed June 30, 2021).
69. Florian Flade, "The June 2018 Cologne Ricin Plot: A New Threshold in Jihadi Bio Terror," Combating Terrorism Center at West Point, *CTC Sentinel*, Vol. 11, Issue 7 (August 2018), pp. 1–4, <https://ctc.usma.edu/wp-content/uploads/2019/01/CTC-SENTINEL-082018-final.pdf> (accessed June 30, 2021).
70. Unpublished data building on Robin Simcox, "European Islamist Plots and Attacks Since 2014—and How the U.S. Can Help Prevent Them," Heritage Foundation *Backgrounder* No. 3236, August 1, 2017, <http://www.heritage.org/europe/report/european-islamist-plots-and-attacks-2014-and-how-the-us-can-help-prevent-them>.
71. CBS News, "American Killed in Paris Terror Attacks," updated November 14, 2015, <https://www.cbsnews.com/news/paris-attacks-americans-us-state-department/> (accessed June 30, 2021); Camila Domonoske, "Americans Were Among Those Killed in Brussels Attacks, Says Kerry," NPR, March 25, 2016, <https://www.npr.org/sections/thetwo-way/2016/03/25/471829453/kerry-americans-were-among-those-killed-in-brussels-attacks> (accessed June 30, 2021); and BBC News, "Nice Attack: Who Were the Victims?" August 19, 2016, <https://www.bbc.co.uk/news/world-europe-36805164> (accessed June 30, 2021).
72. BBC News, "Tajikistan 'Attack' Leaves Four Foreign Cyclists Dead," July 30, 2018, <https://www.bbc.co.uk/news/world-asia-45004059> (accessed June 30, 2021), and Morgan Winsor and Dragana Jovanovic, "ISIS Claims Responsibility for Sri Lanka Easter Bombings that Killed over 350," ABC News, April 23, 2019, <https://abcnews.go.com/International/isis-claims-responsibility-sri-lanka-easter-bombings-killed/story?id=62570339> (accessed June 30, 2021).
73. General John W. Nicholson, Commander, U.S. Forces–Afghanistan, statement on "The Situation in Afghanistan" before the Committee on Armed Services, U.S. Senate, February 9, 2017, p. 1, https://www.armed-services.senate.gov/imo/media/doc/Nicholson_02-09-17.pdf (accessed June 30, 2021). See also transcript, "Department of Defense Press Briefing by General Nicholson in the Pentagon Briefing Room," U.S. Department of Defense, December 2, 2016, <https://www.defense.gov/News/Transcripts/Transcript-View/Article/1019029/departments-of-defense-press-briefing-by-general-nicholson-in-the-pentagon-brief/> (accessed June 30, 2021).

74. Madiha Afzal, "Terrorism in Pakistan Has Declined, but the Underlying Roots of Extremism Remain," The Brookings Institution, Initiative on Nonstate Armed Actors, January 15, 2021, <https://www.brookings.edu/blog/order-from-chaos/2021/01/15/terrorism-in-pakistan-has-declined-but-the-underlying-roots-of-extremism-remain/> (accessed September 11, 2021).
75. Institute for Conflict Management, South Asia Terrorism Portal, "Fatalities in Terrorist Violence in Pakistan 2000–2019," <https://www.satp.org/satporgtp/countries/pakistan/database/casualties.htm> (accessed June 25, 2019). Data as of June 28, 2019.
76. Ankit Panda, "Jaish-e-Mohammed Leader's 'Global Terrorist' Designation Is Overdue," *The Diplomat*, March 4, 2019, <https://thediplomat.com/2019/03/jaish-e-mohammed-leaders-global-terrorist-designation-is-overdue/> (accessed June 29, 2021).
77. BBC News, "US Admiral: 'Haqqani Is Veritable Arm of Pakistan's ISI,'" September 22, 2011, <https://www.bbc.com/news/av/world-us-canada-15026909> (accessed September 11, 2021).
78. Reuters, "Taliban Name New Afghan Government, Interior Minister on U.S. Sanctions List," September 7, 2021, <https://www.reuters.com/world/india/taliban-fire-air-scatter-kabul-protesters-no-reports-injuries-2021-09-07/> (accessed September 11, 2021).
79. Gregory Sullivan, Audit Director, Memorandum for Department of Defense Lead Inspector General, "Subject: Operation Inherent Resolve—Summary of Work Performed by the Department of the Treasury Related to Terrorist Financing, ISIS, and Anti-Money Laundering for First Quarter Fiscal Year 2021," U.S. Department of the Treasury, Office of Inspector General, January 4, 2021, p. 4, <https://oig.treasury.gov/sites/oig/files/2021-01/OIG-CA-21-012.pdf> (accessed September 11, 2021).
80. Eric Schmitt, Thomas Gibbons-Neff, Helene Cooper, and Alissa J. Rubin, "Its Territory May Be Gone, but the U.S. Fight Against ISIS Is Far from Over," *The New York Times*, March 24, 2019, <https://www.nytimes.com/2019/03/24/us/politics/us-isis-fight.html> (accessed June 30, 2021).
81. Shawn Snow, "ISIS Loses More than Half Its Fighters from US Airstrikes and Taliban Ground Operations," *Military Times*, February 27, 2020, <https://www.militarytimes.com/flashpoints/2020/02/27/isis-loses-more-than-half-its-fighters-from-us-airstrikes-and-taliban-ground-operations/> (accessed June 30, 2021).
82. Snow, "ISIS Loses More than Half Its Fighters from US Airstrikes and Taliban Ground Operations."
83. Thomas Gibbons-Neff and Mugib Mashal, "ISIS Is Losing Afghan Territory. That Means Little for Its Victims," *The New York Times*, December 2, 2019, <https://www.nytimes.com/2019/12/02/world/asia/isis-afghanistan-baghdadi.html> (accessed June 30, 2021).
84. Abhinav Pandya, "The Pakistan Connection: How ISKP Became Islamabad's Latest Proxy," *The National Interest*, September 7, 2021, <https://nationalinterest.org/blog/buzz/pakistan-connection-how-iskp-became-islamabad%E2%80%99s-latest-proxy-193221> (accessed September 11, 2021).
85. Jamie Dettmer, "Hardline Haqqani Network Put in Charge of Kabul Security," Voice of America, August 19, 2021, <https://www.voanews.com/south-central-asia/hardline-haqqani-network-put-charge-kabul-security> (accessed September 11, 2021).
86. Lara Seligman, "Pentagon Prepared for 'Mass Casualty' Attack at Kabul Airport Hours Before Explosion," *Politico*, August 30, 2021, <https://www.politico.com/news/2021/08/30/pentagon-mass-casualty-attack-kabul-507481> (accessed September 11, 2021).
87. Sandi Sidhu, Nick Paton Walsh, Tim Lister, Oren Liebermann, Laura Smith-Spark, and Saskya Vandoorne, "Ten Family Members, Including Children, Dead After US Strike in Kabul," CNN, updated August 30, 2021, <https://www.cnn.com/2021/08/29/asia/afghanistan-kabul-evacuation-intl/index.html> (accessed September 11, 2021).

Conclusion: Global Threat Level

America faces challenges to its security at home and interests abroad from countries and organizations with:

- Interests that conflict with those of the United States;
- Sometimes hostile intentions toward the U.S.; and
- In some cases, growing military capabilities that are leveraged to impose an adversary's will by coercion or intimidation of neighboring countries, thereby creating regional instabilities.

The government of the United States constantly faces the challenge of employing—sometimes alone but more often in concert with allies—the right mix of diplomatic, economic, public information, intelligence, and military capabilities to protect and advance U.S. interests. Because this *Index* focuses on the military component of national power, its assessment of threats is correspondingly an assessment of the military or physical threat posed by each entity addressed in this section.

Russia remains the primary threat to American interests in Europe as well as the most pressing threat to the United States. Moscow remains committed to massive pro-Russia propaganda campaigns in Ukraine and other Eastern European countries, has continued its active support of separatist forces in Ukraine, regularly performs provocative military exercises and training missions, and in 2021 pressured Ukraine with a large buildup of forces

along its border, raising speculation about a possible incursion. It also has sustained its increased investment in the modernization of its military and has gained significant combat experience while continuing to sabotage U.S. and Western policy in Syria and Ukraine. Its economy was affected in the early stages of the COVID-19 pandemic but rebounded in the later stages and has grown in 2021. The *2022 Index* again assesses Russia's behavior as “aggressive” and its growing capabilities as “formidable” (the highest category on the scale).

China is the most comprehensive threat the U.S. faces. It remains “aggressive” in the scope of its provocative behavior and earns the score of “formidable” for its capability because of its continued investment in the modernization and expansion of its military and the particular attention it has paid to its space, cyber, and artificial intelligence capabilities. It launched its first domestically produced aircraft carrier this year and continues construction of its second. The People's Liberation Army continues to extend its reach and military activity beyond its immediate region and engages in larger and more comprehensive exercises, including live-fire exercises in the East China Sea near Taiwan and aggressive naval and air patrols in the South China Sea. It has continued to conduct probes of the South Korean and Japanese air defense identification zones, drawing rebukes from both Seoul and Tokyo, and has been especially aggressive in sailing and flying through the seas and airspace around Taiwan.

Iran represents by far the most significant security challenge to the United States, its allies, and its interests in the greater Middle

Behavior of Threats

	HOSTILE	AGGRESSIVE	TESTING	ASSERTIVE	BENIGN
China		✓			
Russia		✓			
Iran		✓			
North Korea			✓		
Non-State Actors		✓			
OVERALL		✓			

Capability of Threats

	FORMIDABLE	GATHERING	CAPABLE	ASPIRATIONAL	MARGINAL
China	✓				
Russia	✓				
Iran		✓			
North Korea		✓			
Non-State Actors			✓		
OVERALL		✓			

Threats to U.S. Vital Interests

	SEVERE	HIGH	ELEVATED	GUARDED	LOW
China		✓			
Russia		✓			
Iran		✓			
North Korea		✓			
Non-State Actors		✓			
OVERALL		✓			

East. This is underscored by its open hostility to the United States and Israel, sponsorship of terrorist groups like Hezbollah, history of threatening the commons, and increased activity associated with its nuclear program. Iran relies heavily on irregular (including political) warfare against others in the region and fields more ballistic missiles than are fielded by any of its neighbors. Its development of ballistic missiles and its potential nuclear capability

also make it a long-term threat to the security of the U.S. homeland. In addition, Iran has continued its aggressive efforts to shape the domestic political landscape in Iraq, adding to the general instability of the region. The *2022 Index* extends the *2021 Index*’s assessment of Iran’s behavior as “aggressive” and its capability as “gathering.”

North Korea’s military poses a security challenge for American allies South Korea

and Japan as well as for U.S. bases in those countries and on Guam. North Korean officials are belligerent toward the United States, often issuing military and diplomatic threats. Though Pyongyang has refrained from nuclear tests during 2021, it has engaged in a range of provocative behavior that includes missile tests.

North Korea has used its missile and nuclear tests to enhance its prestige and importance domestically, regionally, and globally and to extract various concessions from the United States in negotiations on its nuclear program and various aid packages. Such developments also improve North Korea's military posture. U.S. and allied intelligence agencies assess that Pyongyang has already achieved nuclear warhead miniaturization, the ability to place nuclear weapons on its medium-range missiles, and an ability to reach the continental United States with a missile. North Korea also uses cyber warfare as a means of guerilla warfare against its adversaries and international financial institutions. This *Index* therefore assesses the overall threat from North Korea, considering the range of contingencies, as "testing" for level of provocation of behavior and "gathering" for level of capability.

A broad array of terrorist groups remain the most hostile of any of the threats to America examined in the *Index* even though they fall short of the state-level capabilities possessed

by countries such as Iran. The primary terrorist groups of concern to the U.S. homeland and to Americans abroad are the Islamic State of Iraq and al-Sham (ISIS) and al-Qaeda. Al-Qaeda and its branches remain active and effective in Syria, Yemen, Iraq, and the Sahel of Northern Africa. Though no longer a territory-holding entity, ISIS also remains a serious presence in the Middle East, in South and Southeast Asia, and throughout Africa, threatening stability as it seeks to overthrow governments and impose an extreme form of Islamic law. Its ideology continues to inspire attacks against Americans and U.S. interests. Fortunately, Middle East terrorist groups remain the least capable threats facing the U.S., but they cannot be dismissed.

Just as there are American interests that are not covered by this *Index*, there may be additional threats to American interests that are not identified here. This *Index* focuses on the more apparent sources of risk and those that appear to pose the greatest threat.

Compiling the assessments of these threat sources, the 2022 *Index* again rates the overall global threat environment as "aggressive" and "gathering" in the areas of threat actor behavior and material ability to harm U.S. security interests, respectively, leading to an aggregated threat score of "high."

Our combined score for threats to U.S. vital interests can be summarized as:

Threats to U.S. Vital Interests: Summary

