

Global Operating Environment

Assessing the Global Operating Environment

Measuring the “strength” of a military force—the extent to which that force can accomplish missions—requires examination of the environments in which the force operates. Aspects of one environment may facilitate military operations; aspects of another may work against them. A favorable operating environment presents the U.S. military with obvious advantages; an unfavorable operating environment may limit the effect of U.S. military power. The capabilities and assets of U.S. allies, the strength of foes, the region’s geopolitical environment, and the availability of forward facilities and logistics infrastructure all factor into whether an operating environment can support U.S. military operations.

When assessing an operating environment, one must pay particular attention to any U.S. treaty obligations with countries in the region. A treaty defense obligation ensures that the legal framework is in place for the U.S. to maintain and operate a military presence in a particular country. In addition, a treaty partnership usually yields regular training exercises and interoperability as well as political and economic ties.

Additional factors—including the military capabilities of allies that might be useful to U.S. military operations; the degree to which the U.S. and allied militaries in the region are interoperable and can use, for example, common means of command, communication, and other systems; and whether the U.S. maintains key bilateral alliances with nations in the region—also affect the operating environment.

Likewise, nations where the U.S. has stationed assets or permanent bases and countries from which the U.S. has launched military operations in the past may provide needed support for future U.S. military operations. The relationships and knowledge gained through any of these factors would undoubtedly ease future U.S. military operations in a region and contribute greatly to a positive operating environment.

In addition to U.S. defense relations within a region, additional criteria—including the quality of the local infrastructure, the political stability of the area, whether or not a country is embroiled in any conflicts, and the degree to which a nation is economically free—should also be considered.

Then there are low likelihood–high consequence events that occur infrequently but, when they do happen, can radically alter conditions in ways that affect U.S. interests. Massive natural disasters like Typhoon Tip in 1979¹ or the explosion of Mount Tambora in 1816² can displace populations, upend regional power arrangements, or destroy critical infrastructure. The eruption of Mount Pinatubo did just that in 1991, causing so much damage to Clark Airbase and Subic Bay Naval Station that the cost, combined with diplomatic frictions between the U.S. and the Philippines, led the U.S. to abandon these strategic facilities.³ A massive solar flare could have a similar impact on a much larger scale because of the level of dependence on electrical power across our world. Scientists, analysts, planners, and officials in

public and commercial ventures study such things but seldom take concrete action to mitigate their potential impact.

For the past couple of years, the world has been shaken by the COVID-19 pandemic that has caused governments to spend extraordinary sums of money not only to manage the public health crisis, but also to mitigate the economic impact on their countries. The economic and societal stresses stemming from the pandemic have put terrific pressures on political establishments. They also have caused funding for such essential government functions as defense to be reallocated to meet the more immediate demands of the pandemic and—given the threat of contagion—mitigation measures to be adopted at the expense of military exercises, training events, and deployments.

It remains to be seen what the long-term consequences will be, but for the assessed year of 2021, the COVID-19 pandemic is still having an impact. Training activities that would normally keep military forces in a ready status

and related financial accounts that have come under tremendous pressure have caused problems for allied countries that would otherwise work to ensure that their military forces are able to work together effectively. The impact of the pandemic on specific countries is addressed in the assessments of military readiness, political stability, and access to training, exercise, and operational basing opportunities.

Each of these factors contributes to an informed judgment as to whether a particular operating environment is favorable or unfavorable to future U.S. military operations. The operating environment assessment is meant to add critical context to complement the threat environment and U.S. military assessments that are detailed in subsequent sections of the *2022 Index*.

A final note: This *Index* refers to all disputed territories by the names employed by the United States Department of State and should not be seen as reflecting a position on any of these disputes.

Endnotes

1. Meghan Evans, "Earth's Strongest, Most Massive Storm Ever," *Scientific American*, October 12, 2012, <https://www.scientificamerican.com/article/earths-strongest-most-massive-storm-ever/> (accessed July 6, 2021).
2. Robert Evans, "Blast from the Past: The Eruption of Mount Tambora Killed Thousands, Plunged Much of the World into a Frightful Chill and Offers Lessons for Today," *Smithsonian Magazine*, July 2002, <https://www.smithsonianmag.com/history/blast-from-the-past-65102374/> (accessed July 6, 2021).
3. Philip Shenon, "U.S. Will Abandon Volcano-Ravaged Air Base, Manila Is Told," *The New York Times*, July 16, 1991, <https://www.nytimes.com/1991/07/16/world/us-will-abandon-volcano-ravaged-air-base-manila-is-told.html> (accessed July 6, 2021).

Europe

Daniel Kochis

The past year saw steady U.S. reengagement on European defense. A proposed large-scale withdrawal of troops from Germany was cancelled; an important agreement on enhanced defense cooperation was signed with Poland; an increased focus on Arctic security came more clearly into view; and investments in exercises, infrastructure, and rotational deployments continued. A poorly planned and executed withdrawal from Afghanistan in August tarnished U.S. credibility. European allies remain upset over a lack of U.S. consultation and communication as well as ongoing downstream impact.

NATO underwent a strategic reflection process and continues to operationalize new decisions, exercises, and structures to bolster collective defense and address the emerging challenges of an evolving security landscape. The Wuhan coronavirus pandemic affected defense exercises, making it necessary to repurpose military resources for pandemic response. It also showcased new propaganda vectors to be used by adversaries but did not affect NATO's collective defense posture.

Admiral Robert Burke, Commander of U.S. Naval Forces Europe, U.S. Naval Forces Africa, and Allied Joint Forces Command Naples has described the European and African theaters as “the forefront of great power competition.”¹ External threats to European security include the continued risk of Russian aggression toward the eastern states of NATO, Russian activity in the Arctic, a growing Russian presence in the Mediterranean theater, and Russian

efforts to destabilize Western cohesion. In addition, the threat posed by Chinese investments, technology, and propaganda efforts to the transatlantic alliance have begun to move toward center stage.

The 50 countries in the U.S. European Command (USEUCOM) area of responsibility include approximately one-fifth of the world's population, over 10 million square miles of land, and 13 million square miles of ocean. Some of America's oldest (France) and closest (the United Kingdom) allies are found in Europe. The U.S. and Europe share a strong commitment to the rule of law, human rights, free markets, and democracy. During the 20th century, millions of Americans fought alongside European allies in defense of these shared ideals—the foundations on which America was built.

America's economic ties to the region are likewise important. A stable, secure, and economically viable Europe is in America's economic interest. For more than 70 years, the U.S. military presence has contributed to regional security and stability, and both Europeans and Americans have benefited economically. The member states of the European Union (EU), along with the United States, account for approximately half of the global economy, and the U.S. and EU member countries are generally each other's principal trading partners.

Europe is also important to the U.S. because of its geographical proximity to some of the world's most dangerous and contested regions. From the eastern Atlantic Ocean to the Middle

East, up to the Caucasus through Russia, and into the Arctic, Europe is enveloped by an arc of instability. The European region also has some of the world's most vital shipping lanes, energy resources, and trade choke points.

European basing allows U.S. forces to respond robustly and quickly to challenges to U.S. economic and security interests in and near the region. Russian naval activity in the North Atlantic and Arctic has necessitated a renewed focus on regional command and control and has led to increased operations by U.S. and allied air and naval assets in the Arctic, and Russia's strengthened position in Syria has led to a resurgence of Russian activity in the Mediterranean that has contributed to "congested" conditions.²

Speaking at an Atlantic Council meeting in March 2019, U.S. Joint Chiefs of Staff Chairman General Joseph Dunford explained that the U.S. has two key advantages over adversaries: "our network of allies and partners, and the ability to project power where and when necessary to advance our national interest."³ Nowhere is the value of allies and U.S. basing more apparent than it is in the European operating environment.

U.S. Reinvestment in Europe. Russia's continued aggression has caused the U.S. to reinvest in military capabilities on the continent. In April 2014, the U.S. launched Operation Atlantic Resolve (OAR), a series of actions meant to reassure U.S. allies in Europe, particularly those bordering Russia. Under OAR and funded through the European Deterrence Initiative (EDI), the U.S. has increased its forward presence in Europe (approximately 6,000 soldiers take part in OAR missions and training at any one time across 19 nations);⁴ invested in European basing infrastructure and in prepositioned stocks and equipment and supplies; engaged in enhanced multinational training exercises; and negotiated agreements for increased cooperation with NATO allies.

European Deterrence Initiative. Despite the Trump Administration's proposal to reduce U.S. force levels in Europe, its FY 2021 request for the EDI, although less than the \$6

billion requested in FY 2020 and the \$6.5 billion requested in FY 2019, was still \$4.5 billion.⁵ In FY 2020, EDI-funded requests included (among others):

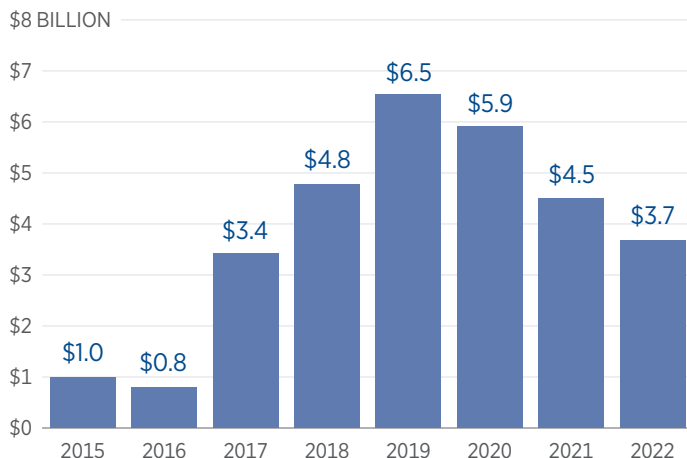
- "Continued presence of an Armored Brigade Combat Team (ABCT) with enablers, a Combat Aviation Brigade (CAB), and a Battalion to support NATO's Enhanced Forward Presence (eFP)";
- "Upgrade[d] Theater Anti-Submarine Warfare infrastructure";
- "Retain[ed] F-15C fighter aircraft in Europe" along with continued prepositioning of equipment; and
- "Enhanced scale and scope of rotational and deployed force element participation in exercise and training events in support of USEUCOM priority lines of effort."⁶

Testifying in April 2021, General Tod Wolters, Commander, U.S. European Command (EUCOM), and NATO's Supreme Allied Commander Europe (SACEUR), highlighted the importance of EDI funding in returning the United States to a posture of deterrence:

EDI enhances our theater posture to deter adversaries and compete in a contested logistics environment, while assuring Allies and Partners. Increases in forward stationed and rotational forces strengthen our contact, blunt, and surge layer capabilities, providing us the ability to compete and win in a multi-domain crisis or conflict. EDI investments improve our response using more robust theater infrastructure and prepositioned stocks. Funding for exercises, training, and building partner capacity bolster the readiness and interoperability of U.S. and Alliance forces. Together, these advances enable our deterrence and defense efforts through rapid deployment and sustainment of forces.⁷

European Deterrence Initiative in Decline

The European Deterrence Initiative (EDI) bolsters NATO collective defense by funding U.S. rotational troop deployments to Europe and critical military infrastructure, as well as exercises and capacity-building with allies.



NOTE: Figures for 2021 and 2022 are budget requests.

SOURCES: U.S. Department of Defense, Office of the Under Secretary of Defense (Comptroller), *Department of Defense Budget, Fiscal Year (FY) 2022: European Deterrence Initiative*, June 2021, p. 2, https://comptroller.defense.gov/Portals/45/Documents/defbudget/FY2022/FY2022_EDI_JBook.pdf (accessed September 2, 2021), and Frederico Bartels and Daniel Kochis, "Congress Should Transform the European Deterrence Initiative into an Enduring Commitment," The Heritage Foundation *Backgrounders* No. 3319, May 29, 2018, <https://www.heritage.org/europe/report/congress-should-transform-the-european-deterrence-initiative-enduring-commitment>.

 heritage.org

The EDI has supported infrastructure improvements across the region. One major EDI-funded project is a replacement hospital at Landstuhl, Germany. When completed in 2022, the new permanent facility "will provide state-of-the-art combat and contingency medical support to service members from EUCOM, AFRICOM and CENTCOM."⁸ Landstuhl's importance is illustrated by the fact that in early March 2020, it was one of the first two overseas U.S. laboratories to be capable of testing for coronavirus.⁹

In addition to the EDI, the Department of State has awarded \$277 million in grants since 2018 through its European Recapitalization Incentive Program (ERIP) and repurposed funds to help U.S. allies in Europe replace Russian equipment with U.S.-made equipment. This has led to \$2.5 billion in equipment sales including procurement of Black Hawk helicopters in Albania, Lithuania, and Slovakia; Stryker vehicles in North Macedonia; Bradley

Fighting Vehicles in Croatia; Bell Huey II helicopters in Bosnia and Herzegovina; and F16 purchases in Bulgaria.¹⁰

Forward Presence. In July 2021, the 1st Armored Brigade Combat Team (ABCT) of the 1st Infantry Division from Fort Riley, Kansas, replaced the outgoing BCT in the eighth armored rotation in support of Operation Atlantic Resolve. The BCT included "approximately 3,800 Soldiers, 80 tanks, 130 Bradley Fighting Vehicles, 15 Paladins, more than 500 tracked vehicles and more than 1,500 wheeled vehicles and equipment."¹¹

Former Army Chief of Staff General Mark Milley has emphasized the value of ground forces in deterrence: "The air [and] maritime capabilities are very important, but I would submit that ground forces play an outsize role in conventional deterrence and conventional assurance of allies. Because your physical presence on the ground speaks volumes."¹²

In addition to back-to-back rotations of armor, the U.S. has maintained a rotational aviation brigade in Europe since February 2017.¹³ As of March 2021, 1st Combat Aviation Brigade, 1st Infantry Division from Fort Riley, Kansas, was to be the seventh aviation rotation with 1,800 troops, 10 CH-47 Chinooks, 25 AH-64 Apaches, 50 UH-60 and HH-60 Black Hawk helicopters, and “1,800 wheeled vehicles and pieces of equipment.”¹⁴ The majority of the brigade is “stationed in Germany, with a forward presence in Latvia, Romania and Poland.”¹⁵

The Biden Administration cancelled plans put in place in July 2020 to withdraw nearly 12,000 troops from Germany. Instead, in April 2021, Secretary of Defense Lloyd Austin announced an increase of 500 U.S. troops to be stationed permanently at Wiesbaden.¹⁶ The U.S. also announced that it will retain three facilities that under the previous plan were to be turned back over to the German government.

In May 2018, the U.S. began to fly MQ-9 Reaper drones on unarmed reconnaissance flights out of Miroslawiec Airbase in Poland. The drones became fully operational in March 2019 when U.S. Air Force (USAF) officials stated that Poland was chosen for the MQ-9s because of its “strategic location.”¹⁷ In June 2020, runway work at Miroslawiec caused drones to be moved temporarily to Ämari Air Base in Estonia, marking the first-time that unmanned U.S. aircraft have operated out of Estonia.¹⁸

In the past, runway work has led to MQ-9s operating out of Campia Turzii Air Base in Romania. In January 2021, the U.S. announced that 90 USAF personnel and an unspecified number of MQ-9s would be based at Campia Turzii “to conduct intelligence, surveillance and reconnaissance missions in support of NATO operations.”¹⁹ According to General Jeffrey Harrigian, Commander of U.S. Air Forces in Europe, U.S. Air Forces Africa, and Allied Air Command, the base’s location 300 miles from the coast “really facilitates our ability to compete in the Black Sea.”²⁰ The Air Force has declined to say whether the deployment is permanent.²¹ In addition to Miroslawiec and

Campia Turzii, the U.S. also operates MQ-9s out of Łask Air Base in Poland.²²

In August 2020, the U.S. and Poland signed the Enhanced Defense Cooperation Agreement, which entered into force in November 2020. The agreement increases U.S. rotational forces in Poland by 1,000 people (for a total of 5,500) and provides for more exercises and infrastructure development that will be able to support a deployment of 20,000 U.S. troops if necessary in the future.²³ In addition:

[The agreement] covers matters such as the establishment of a forward division command in Poznań, stationing of a rotationally-present armoured brigade in Żagań-Świętoszów, deployment of Reaper UAVs squadron to Łask, the establishment of a Polish-US combat training centre (CTC) in Drawsko Pomorskie, the establishment of an airlift cargo hub for USAF in Wrocław-Starachowice, the establishment of the presence of an Army Aviation Brigade on a rotational basis, and a logistics battalion as well as special ops facility in Powiśle, and another special ops facility in Lubliniec.²⁴

The agreement also ironed out legal and cost-sharing arrangements for the increased U.S. presence.²⁵ On November 9, 2020, the U.S. Army’s V Corps, which had been deactivated in 2013, was reactivated, to be fully operational in November 2021.²⁶ Forward deployed at Poznań, Poland, it will remain headquartered at Fort Knox, Kentucky.²⁷

The U.S. has strengthened its presence in Norway as well. In April 2021, the two nations signed the Supplementary Defense Cooperation Agreement, which 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.²⁸ Construction at Evenes will support Norwegian and allied maritime patrol aircraft monitoring of Russian submarine activity. According to Norwegian Foreign Minister Ine Eriksen Soereide, “The agreement

reaffirms Norway's close relationship with the U.S. and confirms Norway's key position on the northern flank of NATO."²⁹

In August 2020, the Marine Corps announced the end of heel-to-toe rotations of 700 Marines to Norway, which began in 2017, opting for shorter, more sporadic deployments.³⁰ The first new deployment in October 2020 consisted of 400 Marines, and in the second, 1,000 Marines were deployed to Setermoen, Norway, from January–March 2021 for Arctic warfare training.³¹ Major General Patrick J. Hermesmann, former Commander of U.S. Marine Corps Forces Europe & Africa, has noted the growing relationship between Norway and the U.S. through “shared hardship of tough, realistic training in this austere environment.”³²

In addition to ground forces, in February and March 2021, four B-1 Lancers were based out of Ørland Air Station in southern Norway, marking the first time the aircraft have been based in Norway.³³ The Lancers conducted training exercises with allies Denmark, Germany, Italy, Norway, and Poland while also practicing landing and refueling at Bodø Air Base above the Arctic Circle.³⁴

In October 2020, at the behest of the United States, Norway announced the reopening of Olavsvern bunker, a mountainside submarine base near Tromsø with “9,800ft of deep water underground docks that can house and refit nuclear submarines.”³⁵ The base, which had been closed in 2002, is now open to U.S. Seawolf-class nuclear submarines.³⁶

The U.S. also continues to rotate a Sustainment Task Force “comprised of nearly 1,000 personnel and 200 pieces of equipment” from “11 active duty, U.S. Army Reserve and National Guard units.” The units that make up the task force are varied and “include ammunition, fuel, movement control, transportation, maintenance, ordnance, supply, and postal services.”³⁷

Operation Atlantic Resolve's naval component has consisted partly of increased deployments of U.S. ships to the Baltic and Black Seas since 2014. However, in 2020, the U.S. spent 82 days in the Black Sea, which is 27 less than the 109 days it spent in 2019.³⁸

Russian undersea activity continues at an elevated level. The U.S. Navy reestablished the 2nd Fleet, which is “responsible for the northern Atlantic Ocean,” in May 2018 nearly seven years after 2011 when it had been disbanded.³⁹ The 2nd Fleet reached full operational capability at the end of 2019.⁴⁰ The fleet was reestablished because of Russian militarization of the Arctic.⁴¹ “This is where the fight is...where the competition is,” according to Vice Admiral Andrew Lewis, Commander of the 2nd Fleet. “Specifically in the Atlantic [and] the undersea capability of the Russians.”⁴² In March 2021, in a statement exercise, three Russian ballistic missile submarines punched through ice in the Arctic near the North Pole.⁴³

For Vice Admiral Lewis, “Anti-submarine warfare is a primary mission for everybody in the United States Navy, regardless of what you wear on your chest.”⁴⁴ Admiral Burke has stated that the 6th Fleet keeps units operating “nearly continuously” in the Arctic and that U.S. submarines “really dominate that area.”⁴⁵ The U.S. also has capable partners in patrolling Arctic waters:

“UK [and] France to name two extremely reliable [and] capable partners. Canada... Norway...all contribute significantly to the theater of undersea warfare fight. Denmark is expanding their capabilities. Now almost every one of those nations that I've mentioned now have significant airborne maritime patrol reconnaissance aircraft, *if not the P-8A version, closely resembling the P-8 capabilities. Many have bought versions similar to the P-8. Their surface combatants today are incredibly capable too.*⁴⁶

In recent years, the U.S. has also made a point of publicly acknowledging the surfacing of nuclear-powered submarines in Arctic waters as a message of deterrence. One such example occurred in May 2021, when the Virginia-class submarine USS *New Mexico* docked in Tromsø, Norway.⁴⁷

Outside the Arctic, as explained by Admiral Burke, “advances in its submarine fleet and

expanding maritime strategic goals have rein-vigorated Russia's access to the broader Atlantic Ocean."⁴⁸ These changes have led officials to state that the U.S. east coast is no longer "a safe haven."⁴⁹

Prepositioned Stocks. The U.S. continues to preposition equipment in Europe across all services. Equipment and ammunition sufficient to support a division will continue to arrive in Europe through 2021.⁵⁰ The U.S. Air Force, Special Forces, and Marine Corps are strengthening their prepositioned stocks, and the Marine Corps Prepositioning Program in Norway is emphasizing cold-weather equipment.⁵¹ The services' Force Design 2030 could change what is stored in the depot with an emphasis on rocket artillery, air-defense systems, and long-range unmanned aircraft while deemphasizing helicopters and tanks.⁵² DOD's FY 2021 budget proposal includes "funding to continue the build of a division-sized set of prepositioned equipment with corps-level enablers that is planned to contain two ABCTs (one of which is modernized), two Fires Brigades, air defense, engineer, movement control, sustainment and medical units."⁵³

In February 2020, General Gustave F. Perna, Commanding General of the U.S. Army Materiel Command, revealed that the U.S. is building an additional Army prepositioned stock set for Europe.⁵⁴ In April 2021, General Wolters testified that:

[W]e expect to establish a U.S. division-sized capability through the combination of forward-stationed forces, rotational forces, and Army Prepositioned Stocks (APS). APS equipment facilitates increased agility and lethality by enabling rapid integration of rotational combat units into operations. During Exercise DEFENDER-Europe 20, U.S. Army Europe and NATO Allies successfully exercised at the battalion and brigade levels, and we plan to assemble a divisional formation on NATO's Eastern flank in Exercise DEFENDER-Europe 24, the first since the end of the Cold War.⁵⁵

In May 2021, General Christopher Cavoli, Commander of U.S. Army Europe and Africa, noted a difference in focus between Defender Europe 2020 (northeastern Europe) and Defender Europe 2021 (southeastern Europe): "[With] Defender 2021 we have decided to exercise the ports, and the airports, and the rail lines, and the roadways throughout southeastern Europe."⁵⁶ Defender Europe 21 will involve 26 nations, including the U.S., and around 28,000 multinational forces in addition to several smaller exercises including:

Swift Response, which involves airborne operations in Estonia, Bulgaria and Romania; Immediate Response, which involves more than 5,000 troops from eight nations conducting live-fire training in 12 different countries; Saber Guardian, which includes more than 13,000 service members doing live-fire training as well as air and missile defense operations; and a command post exercise with 2,000 personnel exercising the ability of a headquarters to command multinational land forces.⁵⁷

Impact of COVID-19. The impact of COVID-19 was felt across the alliance, but it did not alter the alliance's ability to carry out the vital work of collective defense. In November 2020, NATO Secretary General Jens Stoltenberg stated that:

NATO Allies and our militaries have been supporting each other and our partners throughout this pandemic—transporting critical medical supplies, patients and experts; setting up military field hospitals and securing borders; supporting civilian efforts and helping to save lives. At the same time, we remain vigilant and ready, because NATO's main responsibility is to make sure this health crisis does not become a security crisis.⁵⁸

NATO's Euro-Atlantic Disaster Response Coordination Centre (EADRCC) helped to

coordinate assistance based on requests and the availability of supplies. In April 2020, NATO foreign ministers directed Supreme Allied Commander Wolters to help coordinate the matching of requests for aid with offers of assistance and to utilize excess airlift capacity to ease the transport of essential supplies across borders.⁵⁹ NATO's Strategic Airlift Capability (SAC), "a multinational programme that provides assured access to strategic military airlift capability for its 12 member nations,"⁶⁰ was leveraged for pandemic response. The NATO secretary general's 2020 annual report specifies that military forces of NATO allies had flown more than 350 flights to transport medical personnel, transported more than 1,500 tons of equipment, and helped to build almost 100 field hospitals.⁶¹ NATO also established a Pandemic Response Trust Fund, located in Romania and managed out of Taranto, Italy, which stockpiles medical equipment and supplies for allies and partners.⁶²

In addition to NATO facilitation, allies have assisted one another during the pandemic in numerous ways.⁶³ Because of U.S. overseas basing, despite a poor vaccine rollout in most of Europe, thousands of Europeans who are employed by the U.S. military or who are eligible dependents received vaccines at U.S. bases on the continent.⁶⁴ Additionally:

NATO assisted local authorities to fight COVID-19 where the Alliance is deployed. For example, in Afghanistan, the NATO-led Resolute Support Mission contributed to fighting the pandemic with the provision of critical supplies to Afghan security forces in 14 provinces, with several Allies providing essential equipment. In Iraq, essential medical equipment was delivered in coordination with NATO Mission Iraq. In Kosovo, the NATO-led Kosovo Force donated personal protective equipment to hospitals and delivered more than 50 donations of food and clothing to 14 Kosovo municipalities, in coordination with local charities and the Red Cross of Kosovo.⁶⁵

Another important impact of the pandemic was cancellation, postponement, or modification of exercises. Defender 2020, which was to be "the U.S. Army's largest exercise in Europe in 25 years, ranging across ten countries and involving 37,000 troops from at least 18 countries, of which 20,000 soldiers will be deployed from the United States to Europe,"⁶⁶ and drawing heavily on prepositioned equipment, was significantly scaled back, and linked exercises "Dynamic Front, Joint Warfighting Assessment, Saber Strike and Swift Response" were cancelled.⁶⁷ Another linked exercise, Allied Spirit, was postponed from May 2020 to June 2020 and scaled back. The U.S. and Poland were the only participating countries, only 6,000 of a planned 10,000 soldiers took part, and "NATO's strategic airlift capability [was] no longer included."⁶⁸

Despite these changes, the scaled back Defender 2020 was an important exercise that "brought more than 6,000 soldiers and 3,000 pieces of equipment from the US to Europe via air and sea and saw 9,000 pieces of equipment drawn from Army prepositioned stocks on the continent."⁶⁹

Because of coronavirus-related concerns, BALTOPS 2020, which took place in June 2020, for the first time did not include amphibious landings. The lack of amphibious landings, however, allowed for a focus on other areas including testing the ability of NATO's maritime headquarters in Lisbon "to coordinate with 6th Fleet headquarters in Naples, Italy, NATO operation centers and forces in the Baltic Sea."⁷⁰

U.S. Nuclear Weapons in Europe. In his 2021 EUCOM posture statement, General Wolters reaffirmed that "[a]s long as nuclear weapons exist, NATO must remain a nuclear Alliance. NATO's nuclear capability preserves peace, prevents coercion, deters aggression, and instills confidence in the transatlantic bond. The Alliance's strategic forces guarantee security and backstop U.S. operations in Europe."⁷¹

It is believed that until the end of the Cold War, the U.S. maintained approximately 2,500 nuclear warheads in Europe. Unofficial

estimates range between 150 and 200 warheads spread out across bases in Belgium, Italy, Germany, the Netherlands, and Turkey.⁷²

In October 2019, reports surfaced that the U.S. was considering moving the approximately 50 tactical nuclear weapons stored at Incirlik Air Base in Turkey in light of ongoing tensions, but this does not appear to have happened.⁷³ All of these weapons are free-fall gravity bombs designed for use with U.S. and allied dual-capable aircraft. Although tactical nuclear weapons are forward deployed to Incirlik, “there are no aircraft capable of delivering the B-61 gravity bombs co-located at Incirlik Airbase.”⁷⁴ The U.S. has nuclear sharing agreements with Belgium, Italy, Germany, and the Netherlands that allow for U.S. tactical nuclear weapons to be delivered by allied aircraft, but no such agreement is in force with Turkey: “The weapons at Incirlik Air Base in Turkey are solely for use on U.S. aircraft.”⁷⁵

The B61 nuclear gravity bomb that is “deployed from U.S. Air Force and North Atlantic Treaty Organization (NATO) bases” is undergoing a life extension program that is expected to add at least 20 years to its service life and “improve the bomb’s safety, security, and effectiveness.”⁷⁶ The B61-12 bomb, according to U.S. officials, is “intended to be three times more accurate than its predecessors.”⁷⁷ The first production unit is slated for FY 2022 with production completed in 2025.⁷⁸ In November 2020, the U.S. tested the B61-12 successfully with an F-35A following tests with the F-15E and B-2 bomber.⁷⁹

China. At NATO’s 2019 leaders meeting in London, the alliance “recognize[d] that China’s growing influence and international policies present both opportunities and challenges that we need to address together as an Alliance.”⁸⁰ Issues of concern include budding Russian and Chinese military cooperation as well as Chinese technology, propaganda, offensive cyber capabilities, and control of critical infrastructure in Europe, all of which affect NATO’s member states. In an interview, Admiral Burke noted the potential risk to U.S. and alliance interests from Chinese infrastructure acquisitions in Europe:

Today, the Chinese have a controlling interest in 12 European ports. So, are NATO countries going to be able to count on those ports for Free Trade, and if NATO has to defend Europe, will they allow us into those ports to refuel, resupply, do repairs, rearm? We don’t know if we can count on that. It’s a troubling pattern and our European partners are increasingly aware and awakened to this potential threat.⁸¹

In the same interview, he observed that the Chinese are “increasingly present” in the Mediterranean not just with investments, but also with warships.⁸²

Important Alliances and Bilateral Relations in Europe

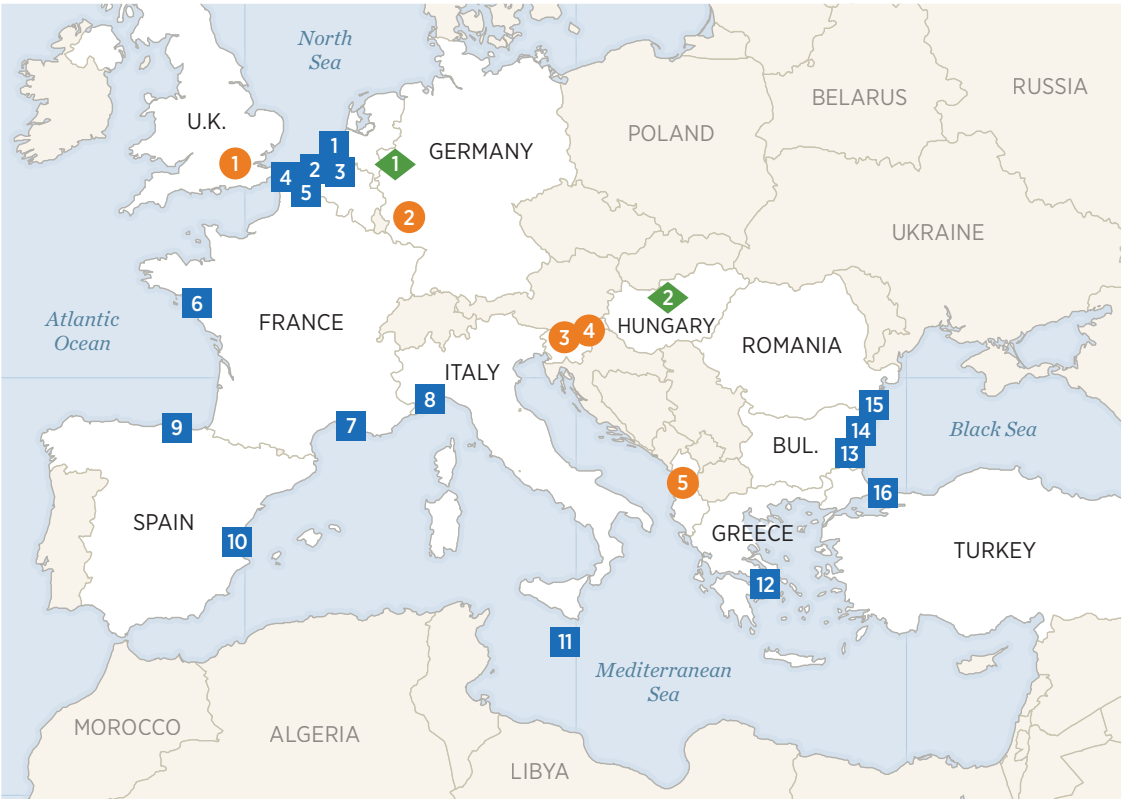
The United States has a number of important multilateral and bilateral relationships in Europe. First and foremost is the North Atlantic Treaty Organization, the world’s most important and arguably most successful defense alliance.

North Atlantic Treaty Organization. NATO is an intergovernmental, multilateral security organization that was designed originally to defend Western Europe from the Soviet Union. It anchored the U.S. firmly in Europe, solidified Western resolve during the Cold War, and rallied European support following the 9/11 terrorist attacks. NATO has been the bedrock of transatlantic security cooperation ever since its creation in 1949 and is likely to remain so for the foreseeable future.

In April 2021, following a U.S. decision to withdraw forces from Afghanistan, NATO declared “that there is no military solution to the challenges Afghanistan faces”⁸³ and ended Operation Resolute Support, a non-combat operation intended to provide “training, advice and assistance to Afghan security forces and institutions.”⁸⁴ The withdrawal of alliance forces began on May 1, 2021.⁸⁵

Two ongoing NATO operations are Kosovo Force (KFOR) and Operation Sea Guardian in the Mediterranean to maintain “maritime

China's Ownership Stake in European Ports, Airports, and Railways



	Unknown	Less than Half	Nearly Half	Majority	Owens		Unknown	Less than Half	Nearly Half	Majority	Owens
PORTS						AIRPORTS					
1 Netherlands—Euromax Terminal (Rotterdam)		●				1 U.K.—Heathrow Airport		●			
2 Belgium—Zeebrugge (Bruges)				●		2 Germany—Frankfurt-Hahn Airport				●	
3 Belgium—Antwerp Gateway		●				3 Slovenia—Ljubljana Airport				●	
4 France—Terminal des Flandres (Dunkirk)			●			4 Slovenia—Maribor Airport					●
5 France—Terminal de France (Le Havre)		●				5 Albania—Tirana Airport			●		
6 France—Terminal du Grand Ouest (Nantes)		●				RAILWAYS					
7 France—Eurofos Terminal (Marseille)		●				1 Germany—Port of Duisburg		●			
8 Italy—Vado Reefer Terminal (Genoa)			●			2 Hungary—BILK Kombiterminal		●			
9 Spain—Noatum Container Terminal (Bilbao)				●							
10 Spain—Noatum Container Terminal (Valencia)				●							
11 Malta—Malta Freeport Terminal (Birżebbuġa)		●									
12 Greece—Piraeus Container Terminal				●							
13 Bulgaria—Port of Burgas	●										
14 Bulgaria—Port of Varna	●										
15 Romania—Port of Constanta	●										
16 Turkey—Kumport Sea Terminal (Istanbul)				●							

* Includes Terminaux Nord and Terminal de France
SOURCE: Heritage Foundation research.

situational awareness, counter-terrorism at sea and support to capacity-building.”⁸⁶ Additional operations include Airborne Surveillance and Interception Capabilities to meet Iceland’s Peacetime Preparedness Needs; NATO Air Policing over the Baltics, Albania, Bulgaria, Montenegro, Romania, and Slovenia;⁸⁷ and support to the African Union Mission in Somalia through occasional air and sealifts while helping to train and build capacity in the African Standby Force.⁸⁸

Finally, there is NATO Mission Iraq (NMI), a non-combat mission to train and build the capacity of Iraqi Security Forces. In February 2021, following an Iraqi government request in late 2020, NATO defense ministers agreed to increase the size of NMI and expand the scope of training activities beyond the Baghdad region.⁸⁹ NATO Secretary General Jens Stoltenberg stated that an incremental increase could raise the number of NATO troops participating in NMI from 500 to around 4,000.⁹⁰

In recent years, NATO has focused strongly on military mobility and logistics in line with its 2014 Readiness Action Plan (RAP). The RAP was designed to reassure nervous member states and put in motion “longer-term changes to NATO’s forces and command structure so that the Alliance will be better able to react swiftly and decisively to sudden crises.”⁹¹

In June 2018, NATO defense ministers agreed to the Four 30s plan to improve the movement of troops in Europe by 2020. “Four 30s” derives from the plan’s objective that NATO should be able to respond to any aggression with 30 battalions, 30 squadrons of aircraft, and 30 warships within 30 days.⁹² According to Secretary General Stoltenberg, “Allies contributed all of the combat forces required for this initiative” in 2019 “and are now working to build and maintain the level of readiness of these forces and organize them into larger formations.”⁹³

At the 2019 London Summit, space was recognized as an operational domain.⁹⁴ Subsequently, in October 2020, NATO agreed to launch a space center, to “be located within existing facilities at Allied Air Command” at

Ramstein Air Base and charged with “support[ing] NATO operations, missions and activities in order to increase NATO Space Domain Awareness through the co-ordination of data, products and services with Allies.”⁹⁵

Enhanced Forward Presence. The centerpiece of NATO’s renewed focus on collective defense is the four multinational battalions stationed in Poland and the Baltic States as part of the alliance’s Enhanced Forward Presence (EFP). Different countries serve as lead (framework) nations, providing overall coordination and the centerpiece force that is augmented by other contributing nations, for different supported countries.

- The U.S. serves as the framework nation in Orzysz, Poland, near the Suwalki Gap. The U.S.-led battlegroup consists of 691 American troops and an armored cavalry squadron with combat service and support enablers augmented by 80 troops from Croatia, 120 from Romania, and 140 from the United Kingdom.⁹⁶
- In Estonia, the United Kingdom serves as the framework nation, headquartered in Tapa with 828 troops in an armored infantry battalion with main battle tanks and armored fighting vehicles along with “self-propelled artillery and air defence assets, engineers, an intelligence, surveillance and reconnaissance group and logistic support elements”; one Icelandic strategic communications civilian; and 337 French troops with main battle tanks and armored fighting vehicles.⁹⁷
- In Adazi, Latvia, Canada is the framework nation with 527 troops and armored fighting vehicles augmented by 21 troops from Albania, 56 from the Czech Republic, one civilian from Iceland, 200 troops from Italy with tanks and armored fighting vehicles, 10 from Montenegro, 175 from Poland with tanks, 97 from Slovakia, 40 from Slovenia, and 346 from Spain with tanks and armored fighting vehicles.⁹⁸

- In Rukla, Lithuania, Germany serves as the framework nation with 583 troops augmented by another 198 from Belgium, 36 from the Czech Republic, 270 from the Netherlands, 195 from Norway with main battle tanks and infantry fighting vehicles, a contribution from Luxembourg,⁹⁹ and one Icelandic public affairs civilian.¹⁰⁰

EFP troops are under NATO command and control; a Multinational Division Headquarters Northeast located in Elblag, Poland, which reached full operational capability in December 2018, coordinates the four battalions.¹⁰¹ In February 2017, the Baltic States signed an agreement to facilitate the movement of NATO forces among the countries.¹⁰² Some EFP host nations have called for additional assets—importantly, enablers to be added to the battalions. Latvia, for example, views it as “extremely important to strengthen allied presence with long-range components, such as fire support, air defence support and on-shore (port)/off-shore components.”¹⁰³

NATO also has established eight Force Integration Units located in Sofia, Bulgaria; Tallinn, Estonia; Riga, Latvia; Vilnius, Lithuania; Bydgoszcz, Poland; Bucharest, Romania; Szekesfehervar, Hungary; and Bratislava, Slovakia. These new units “will help facilitate the rapid deployment of Allied forces to the Eastern part of the Alliance, support collective defence planning and assist in coordinating training and exercises.”¹⁰⁴

At its July 2016 Warsaw summit, NATO agreed to “develop tailored forward presence in the southeast part of the Alliance territory.” Specifically:

Appropriate measures, tailored to the Black Sea region and including the Romanian initiative to establish a multinational framework brigade to help improve integrated training of Allied units under Headquarters Multinational Division Southeast [HQ MND–SE], will contribute to the Alliance’s strengthened deterrence and defence posture, situational

awareness, and peacetime demonstration of NATO’s intent to operate without constraint. It will also provide a strong signal of support to regional security. Options for a strengthened NATO air and maritime presence will be assessed.¹⁰⁵

The land component of this presence is a multinational framework brigade based in Craiova, Romania, under the control of HQ MND–SE in Bucharest.¹⁰⁶ HQ MND–SE achieved final operational capability in March 2018.¹⁰⁷ NATO’s tailored forward presence is supported by units from Bulgaria, Canada, France, Germany, Hungary, Italy, Luxembourg, Poland, Portugal, Romania, Spain, and Turkey.¹⁰⁸

The U.S. and Romania jointly organize the biannual Saber Guardian exercise, which is “designed to improve the integration of multinational combat forces.”¹⁰⁹ In the 2021 iteration, scheduled to take place in Bulgaria, Hungary, and Romania,¹¹⁰ “more than 13,000 service members from 19 countries will conduct live fire and air and missile defense operations, plus a large scale medical evacuation.”¹¹¹ Saber Guardian 21 is one of several exercises linked with DEFENDER-Europe 21, which has a regional focus. According to General Cavoli, “DEFENDER-Europe 21 provides us the best opportunity to hone our abilities alongside our allies and partners in the strategically important Balkans and Black Sea region so that collectively, we are ready to respond to any crisis that may arise.”¹¹²

NATO continues air policing missions over Bulgarian and Romanian airspace. In September and October of 2020, six U.S. F-16s took part in a four-week air policing mission over Bulgaria with Bulgarian air force units and Canadian F-18s flying from Romania.¹¹³ In 2020, the alliance saw a modest uptick in Russian aircraft approaching or violating NATO airspace. Jets were scrambled 400 times across domains, and 350 of these incidents involved Russian military aircraft.¹¹⁴

In October 2019, addressing a NATO capability gap in aerial refueling, the Czech

Republic, Belgium, Germany, Luxembourg, the Netherlands, and Norway jointly procured A330 air-to-air refueling aircraft, to be deployed from 2020–2024; the fourth of nine aircraft was delivered in April 2021.¹¹⁵ Five of the aircraft are planned to operate out of Eindhoven airbase in the Netherlands, and three will operate out of Germany's Cologne–Wahn airbase.¹¹⁶ The U.S. currently accounts for 90 percent of NATO air-to-air refuelings.¹¹⁷

Additionally, in November 2019, NATO announced a \$1 billion package to upgrade its Airborne Warning and Control System (AWACS) planes, coupled with “an announcement that the first of five Global Hawk drones making up the Alliance Ground Surveillance program was en route from the United States to its future home base at Sigonella, Sicily.”¹¹⁸

In 2018, NATO established two new commands: a joint force command for the Atlantic based in Norfolk, Virginia, and a logistics and military mobility command.¹¹⁹ These commands consist of a total of 1,500 personnel, with the logistics command headquartered in Ulm, Germany.¹²⁰ Logistics have been a significant focus of the alliance in recent years. An internal alliance assessment in 2017 reportedly concluded that NATO's “ability to logistically support rapid reinforcement in the much-expanded territory covering SACEUR's (Supreme Allied Commander Europe) area of operation has atrophied since the end of the Cold War.”¹²¹ Former U.S. Commander of European Command Lieutenant General Ben Hodges has described the importance of military mobility for deterrence: “We need to think how fast the Russians are moving. We must be able to move as fast [as] or faster than them so that they do not make the mistake of thinking that they could launch an attack of some sort in an area before we could respond.”¹²²

Continued shortfalls in the alliance's ability to move soldiers and equipment swiftly and efficiently include “limitations of road surface weight capacity, bridges capacity and railway traffic limits” as well as differences in rail gauges and continued legal, procedural, and regulatory slowdowns.¹²³ NATO has focused heavily

on overcoming these barriers, working with the European Union, which retains competencies that are critical to improving military mobility, particularly with regard to overcoming legal and regulatory hurdles. In March 2018, the EU published an Action Plan on Military Mobility that “identifies a series of operational measures to tackle physical, procedural or regulatory barriers which hamper military mobility.”¹²⁴ Cooperation has brought about some beneficial legal and regulatory changes,¹²⁵ but notable challenges persist.

Cyber Capabilities. “A secure cyberspace is essential to everything the Alliance does,” according to NATO's secretary general. “This is why cyber defence is part of NATO's core task of collective defence. NATO has made clear that a severe cyber attack could lead it to invoke Article 5 of the Washington Treaty.”¹²⁶ Ultimately, the decision to invoke Article 5 will be a political decision.

At the 2016 Warsaw summit, NATO recognized cyberspace as a domain of operations, and on August 31, 2018, it established a Cyberspace Operations Center (CYOC) in Mons, Belgium, that will include 70 cyber experts when it becomes fully operational in 2023¹²⁷ and “will provide situational awareness and coordination of NATO operational activity within cyberspace.”¹²⁸ In 2020, NATO published its first cyber doctrine.¹²⁹

In 2017, NATO announced a planned \$1.85 billion expansion of its satellite communications capabilities.¹³⁰ Its decision was driven in part by the acquisition of five Global Hawk surveillance drones, which generate significant data; after delays, the first drone was delivered in 2019 to Sigonella Naval Air Station.¹³¹ Satellite communications are critical both for piloting the Global Hawks and for disseminating the surveillance data they collect in real time.

The alliance's Joint Air Power (JAP) Strategy, released in June 2018, highlights the importance of cyber and space capabilities:

Increasing reliance on cyber and space-based capabilities by Alliance forces presents vulnerabilities for adversaries to

negate critical NATO capabilities through degradation, denial or destruction, whilst providing opportunities for the Alliance to integrate such capabilities with JAP for kinetic and non-kinetic effect. Both the resilience and exploitation of such capabilities is [*sic*] therefore a critical requirement that future development should address.¹³²

Through the NATO Industry Cyber Partnership, NATO has also invested in a stronger relationship with industry. As described by NATO's secretary general:

This initiative, established in 2014, facilitates cooperation for the mutual benefit of both NATO and Allies' industry and academia. In 2019, industry continued to support NATO's cyber defence by providing real-time actionable cyber threat information, thereby enabling stakeholders to take rapid action to respond to threats.¹³³

Areas of further cooperation within NATO include the NATO Intelligence on Cyberspace Community of Interest “to more regularly exchange information, assessments and best practices—improving NATO's ability to prevent and respond to cyber threats,” and the NATO Communications and Information Agency, which “continued to facilitate information exchanges between NATO Allies on cyber threats and incidents through its Cyber Collaboration Network. Twenty-one Allies have joined the network to date.”¹³⁴

With respect to the likely effects of Chinese 5G technology on intelligence sharing in Europe, U.S. officials have said that utilizing Chinese state-controlled companies for next-generation wireless networks would be “nothing short of madness.”¹³⁵ A Chinese presence in European telecommunications networks could decisively compromise the communications integrity of the military and intelligence community. The London Declaration stated that “NATO and Allies, within

their respective authority, are committed to ensuring the security of our communications, including 5G, recognizing the need to rely on secure and resilient systems.”¹³⁶

The landscape in Europe for key decisions regarding Chinese technology in next-generation wireless networks remains in limbo; many nations have taken decisions in recent years to restrict Chinese vendors from 5G networks, but these threat perceptions are not uniform. The impact of the emerging patchwork approach toward Chinese 5G technology on the European operating environment will become clearer in the coming years.

Ballistic Missile Defense. NATO's ballistic missile defense (BMD) achieved initial operational capability in July 2016, offering a stronger capability to defend alliance populations, territory, and forces across the southern portion of Europe from a potential ballistic missile attack.

- An Aegis Ashore site in Deveselu, Romania, became operational in May 2016, and upgrades were completed in August 2019.¹³⁷
- An AN/TPY-2 forward-based early-warning BMD radar established at Kürecik, Turkey, has a range of up to 1,800 miles. The U.S. is also reportedly building a second undisclosed site near Malatya, expanding capability at that location.¹³⁸
- BMD-capable U.S. Aegis-equipped ships are forward deployed at Rota, Spain.¹³⁹ Two additional destroyers will be based out of Rota by 2025 or 2026, bringing the total to six; Rota's four current destroyers are the “workhorses of deterrence” according to General Wolters.¹⁴⁰
- A second Aegis Ashore site in Redzikowo, Poland, that broke ground in May 2016 has faced delays but was commissioned in September 2020 and will begin operations in 2022.¹⁴¹

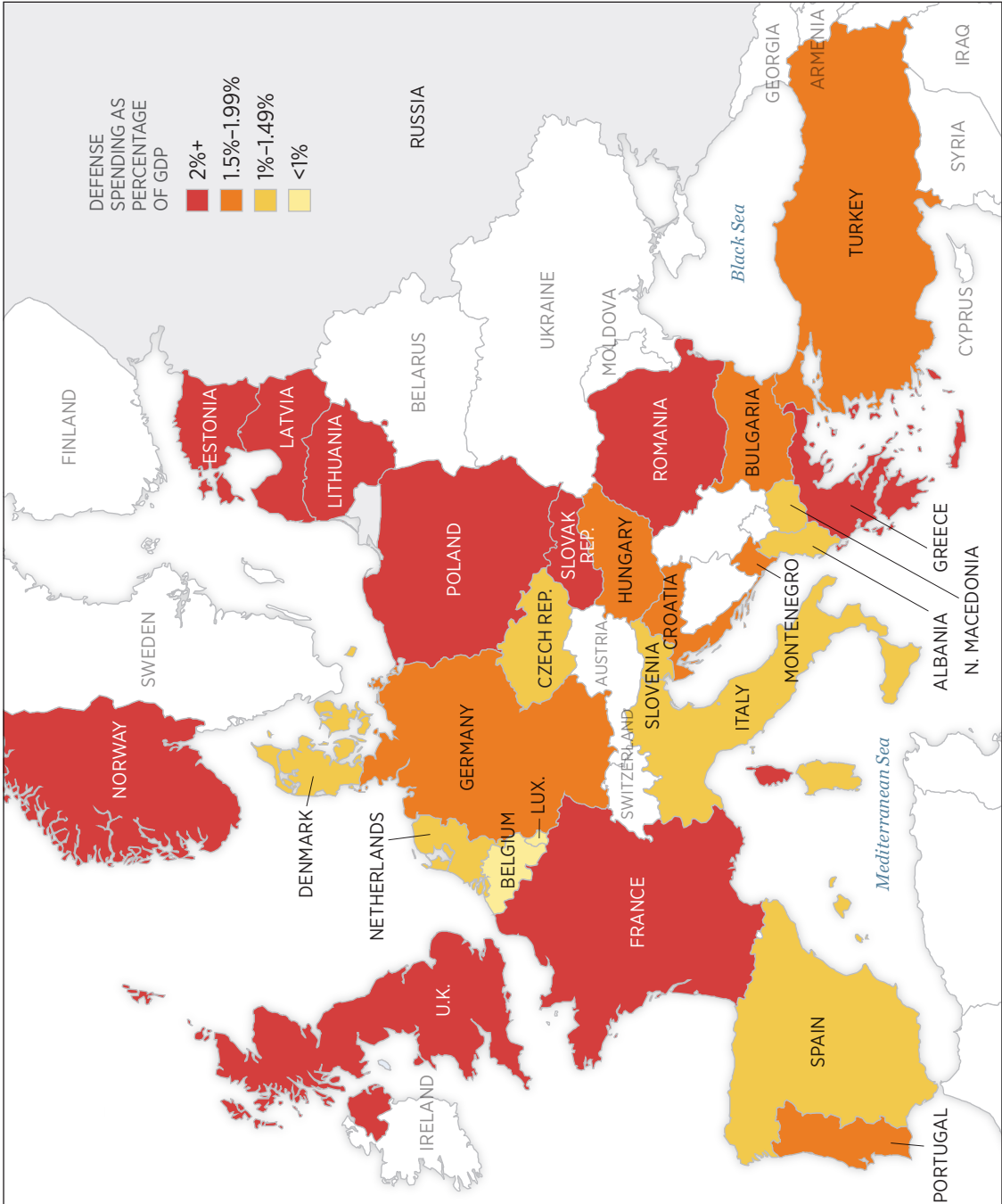
MAP 2

Threat Proximity Largely Dictates Military Spending

In Europe, NATO members closer to Russia and the Middle East spend, in general, more on defense than those further away.

NOTES: Figures are estimates for 2021. Iceland is not listed because it has no military.
SOURCE: Press release, "Defence Expenditure of NATO Countries (2013–2020)," North Atlantic Treaty Organization, March 16, 2021, https://www.nato.int/nato_static_fl2014/assets/pdf/2021/3/pdf/210316-pr-2020-2021/30-en.pdf (accessed July 23, 2021).

 heritage.org



- Ramstein Air Base in Germany hosts a command and control center.¹⁴²
- The U.K. operates an early warning BMD radar at RAF Fylingdales in England. The U.K. continues to consider upgrades to its Type 45 Destroyers with BMD capable missiles.¹⁴³
- In May and June 2021, 10 nations—Belgium, Denmark, France, Germany, Italy, the Netherlands, Norway, Spain, the United Kingdom, and the United States—took part in the biannual BMD exercise Formidable Shield.¹⁴⁴ Formidable Shield 21 features 15 ships, 10 aircraft, and 3,300 participants¹⁴⁵ and “is designed to improve allied interoperability in a live-fire joint IAMD [Integrated Air and Missile Defense] environment, using NATO command and control reporting structures.”¹⁴⁶

In January 2017, the Russian embassy in Norway threatened that if Norway contributes ships or radar to NATO BMD, Russia “will have to react to defend our security.”¹⁴⁷ Norway operates four *Fridtjof Nansen*-class Aegis-equipped frigates that are not currently BMD capable.¹⁴⁸ A fifth Aegis-equipped frigate, the *Helge Ingstad*, collided with an oil tanker and sustained so much damage that the government has decided to scrap it.¹⁴⁹

Denmark, which agreed in 2014 to equip at least one of its *Iver Huitfeldt*-class frigates with radar to contribute to NATO BMD, reaffirmed this commitment in the Defence Agreement 2018–2023.¹⁵⁰ Russia’s ambassador in Copenhagen has openly threatened Denmark for agreeing to contribute: “I do not believe that Danish people fully understand the consequences of what may happen if Denmark joins the American-led missile defense system. If Denmark joins, Danish warships become targets for Russian nuclear missiles.”¹⁵¹

In March 2019, the first of four Dutch *De Zeven Provinciën*-class frigates received a SMART-L Multi-Mission/Naval (MM/N) D-band long-range radar upgrade that is

“capable of BMD mission (surveillance and tracking of ballistic missiles) up to 2000 km while simultaneous[ly] maintaining the air defence capability.”¹⁵² All four Dutch frigates will receive the radar upgrade and carry SM-3 surface-to-air missiles.¹⁵³ In December 2020, the Royal Netherlands and German navies signed an agreement to work jointly to develop a replacement for the Dutch *De Zeven Provinciën*-class frigate and Germany’s three F124 *Sachsen*-class frigates.¹⁵⁴

Belgian Admiral Jan de Beurme stated in April 2021 that “we are studying the feasibility of integrating ballistic missile defense shooter capabilities into the new frigates.”¹⁵⁵ A contract to develop a weapons suite for a joint Belgian and Dutch procurement of two multipurpose frigates apiece was awarded in February 2019, and the vessels are expected to enter service beginning in 2024.¹⁵⁶

Spain currently operates four Aegis-equipped F-100 *Alvaro de Bazan*-class frigates, but they are not yet BMD capable.¹⁵⁷ In April 2019, Spain signed an agreement to procure five F-110 multi-mission frigates; the first F-110 will likely be deployed in 2026. The Aegis-equipped frigates “will host the first naval solid-state S-band radar for the Spanish Navy.”¹⁵⁸

The Italian Navy is procuring seven multi-role offshore patrol vessels (PPAs) that are to be delivered from 2021–2026.¹⁵⁹ The first of two PPAs in full configuration that are BMD capable will be delivered in 2024.¹⁶⁰

Quality of Armed Forces in the Region

Article 3 of the 1949 North Atlantic Treaty, NATO’s founding document, states that at a minimum, members “will maintain and develop their individual and collective capacity to resist armed attack.”¹⁶¹ Regrettably, only a handful of NATO members are living up to their Article 3 commitments.

In 2020, 11 countries—Estonia (2.33 percent); France (2.04 percent); Greece (2.68 percent); Latvia (2.27 percent); Lithuania (2.13 percent); Norway (2.00 percent); Poland (2.31 percent); Romania (2.07 percent); the Slovak

Republic (2.00 percent); the United Kingdom (2.32 percent); and the United States (3.73 percent)—spent the required minimum of 2 percent of gross domestic product (GDP) on defense,¹⁶² and 18 NATO allies spent 20 percent of their defense budgets on “major new capabilities.”¹⁶³ NATO defense spending continues to trend upward: “2020 marked the sixth consecutive year of growth in defence spending by European Allies and Canada, with an increase in real terms of 3.9% from 2019 to 2020.”¹⁶⁴

Germany. Germany remains an economic powerhouse that punches well below its weight in terms of defense. In 2020, it spent only 1.56 percent of GDP on defense and 16.9 percent of its defense budget on equipment.¹⁶⁵ In November 2019, German defense Minister Annegret Kramp-Karrenbauer announced that the nation may not attain the 2 percent benchmark until 2031.¹⁶⁶ German defense spending is rising, however: The \$63.8 billion budget for 2021 is a 3.2 percent increase over the budget for 2020.¹⁶⁷

Despite the positive momentum, the German military remains underfunded and underequipped. One former German diplomat has stated that without NATO, Germany “would have to double its defence budget to 3–3.5 per cent of GDP or risk being ‘completely blind, deaf and defenceless.’”¹⁶⁸

Germany continues to serve as the framework nation for NATO’s EFP battalion in Lithuania, with 583 troops stationed there.¹⁶⁹ Germany is also spending \$110 million through 2021 to upgrade facilities in Lithuania that include barracks used by the multinational battalion.¹⁷⁰ The Luftwaffe has taken part in Baltic Air Policing 13 times—more than any other nation’s armed forces—most recently out of Šiauliai air base in Lithuania in the summer of 2020¹⁷¹ and out of Ämari Air Base in Estonia from September 2020 to May 2021.¹⁷²

Germany maintains 70 troops in Kosovo as part of NATO’s Kosovo Force¹⁷³ and had been the second-largest contributor to NATO’s Resolute Support Mission in Afghanistan with 1,300 troops.¹⁷⁴ In April 2021, the Bundestag extended the mandate for Germany’s

participation in NATO’s Sea Guardian maritime security operation, as well as Germany’s participation in United Nations Mission in South Sudan, extending both mandates through March 31, 2022.¹⁷⁵ German forces also participate in a number of additional U.N. peacekeeping missions including missions in Lebanon and Mali.¹⁷⁶

In October 2020, Germany extended its non-combat training mission in Iraq and its air-to-air refueling and air surveillance radar missions in support of the counter-ISIS coalition, but it ended its Tornado reconnaissance mission on March 31, 2020.¹⁷⁷ Germany maintains 90 soldiers in Iraq helping to train Kurdish forces.¹⁷⁸

In April 2017, the Bundeswehr established a new cyber command, which will have a staff of approximately 14,500 by the time it becomes fully operational this year.¹⁷⁹ Germany also led NATO’s Very High Readiness Joint Task Force (VJTF) in 2019 and will do so again in 2023, with “the earmarked units prioritised for modernisation and upgrades.”¹⁸⁰

Although Germany’s forces have taken on additional roles in recent years, its overall military continues to suffer serious equipment and readiness issues. As of December 2020, the Federal Ministry of Defence estimated that readiness for all major weapons systems was 74 percent—only a slight improvement since June 2020’s 71 percent.¹⁸¹

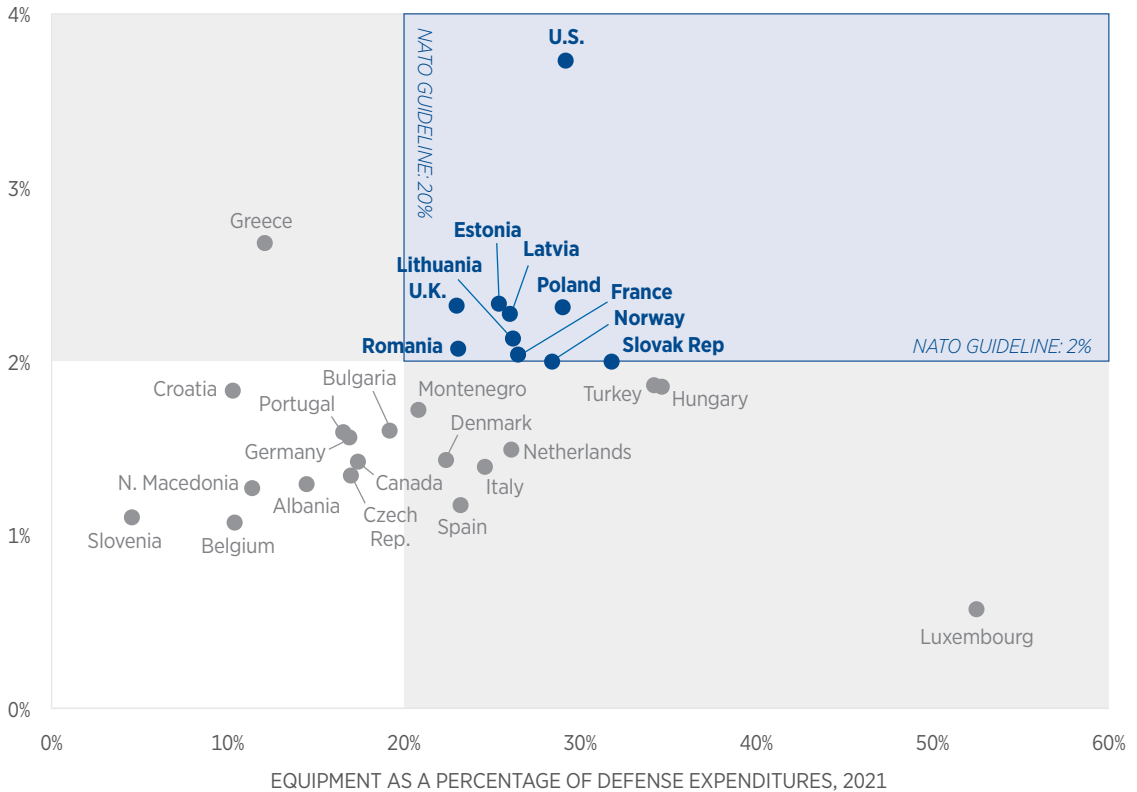
Deployments often strain the military for years. In one example, following deployment of TIGER combat helicopters to Mali in 2017–2018, “the concentration of all available resources in training, personnel, special tools and spare parts on this 15-month deployment halted the process chain in domestic operations to such an extent that this continued to have a significant disruptive impact on materiel readiness in 2020.”¹⁸² Even Germany’s robust contribution to Baltic Air Policing “takes everything it has, often at the expense of training initiatives.”¹⁸³

Significant problems identified in a February 2021 parliamentary report include just 13 operational LEOPARD 2 battle tanks being

Less than Half of NATO Members Follow Defense Spending Guidelines

NATO members are expected to spend at least 2 percent of their GDP on defense, and at least 20 percent of their defense spending is supposed to go to equipment. Only the U.S. and nine other nations do both.

DEFENSE SPENDING AS A PERCENTAGE OF GDP, 2021



NOTE: Figures are estimates for 2021. Iceland is not listed because it has no military.

SOURCE: Press release, "Defence Expenditure of NATO Countries (2013–2020)," North Atlantic Treaty Organization, March 16, 2021, https://www.nato.int/nato_static_fi2014/assets/pdf/2021/3/pdf/210316-pr-2020-30-en.pdf (accessed July 23, 2021).

heritage.org

available for training in 2020 (well under the target of 35)¹⁸⁴ and procurement knots such as those that resulted in a lack of cold-weather suits and flight helmets for the Navy.¹⁸⁵ In September 2020, a tender to replace Germany's CH-53G heavy transport helicopters was

cancelled because of high cost, although a replacement is still being sought.¹⁸⁶ However, there also was some small progress in readiness; for instance, six more Eurofighters were available for flight operations every day in 2020 than were available in 2019.¹⁸⁷

Equipment problems are creating downstream pilot issues. Nearly half of the Luftwaffe's pilots are unable to meet NATO training requirements because a shortage of available planes has caused a lack of flight time.¹⁸⁸ As a result, more pilots are leaving the armed forces.¹⁸⁹ Only 106 of the air force's 220 jet pilot positions are filled, and only 44 out of 84 helicopter pilot positions are filled.¹⁹⁰

The situation is not much better for the navy. Problems with naval submarines include "long yard periods, difficulties with main batteries and the practice of 'controlled removal' from some submarines in order to keep others operational."¹⁹¹ Reports surfaced in March 2021 that more than 100 German vessels including submarines rely on a Russian navigation system that does not meet NATO standards and that "[d]uring a worst-case cyberattack, navigation data could be hacked and the ship could fully lose operability."¹⁹²

In December 2017, Germany's F-125 *Baden-Württemberg*-class frigate failed sea trials because of "software and hardware defects."¹⁹³ The frigate reportedly had "problems with its radar, electronics and the flameproof coating on its fuel tanks," was "found to list to the starboard," and lacked sufficiently robust armaments as well as the ability to add them.¹⁹⁴ Concerns have been raised about whether the frigate's ability to defend against aerial attack is so deficient that the ship is fit only for "stabilization operations."¹⁹⁵ In addition, the lack of sonar and torpedo tubes makes the ship vulnerable to attack by submarines.¹⁹⁶

Germany returned the ship to the shipbuilder following delivery.¹⁹⁷ The redesigned *Baden-Württemberg* was belatedly commissioned in June 2019, and Germany took delivery of the third of four F-125s in March 2021.¹⁹⁸ In January 2020, Germany announced a \$6.7 billion contract with a Dutch and German shipbuilder to build the next-generation MKS 180 frigate, with the first of four (with the possibility of another two) to be delivered in 2027.¹⁹⁹

The number of personnel on active duty in Germany's army rose from 176,000 in 2016 to 183,500 in 2020.²⁰⁰ According to

the International Institute for Strategic Studies (IISS):

The government recognizes that the force structure needs to expand in light of Germany's ambitious plans but is grappling with recruitment and retention issues. To address this, Berlin launched a new strategy in October 2019, designed to create a more flexible reserve cadre that can rapidly respond to territorial and collective-defence tasks.²⁰¹

However, partially because of the pandemic, Germany recruited 19 percent fewer people in 2020 than it recruited in 2019; "around 20,200 military personnel positions above the junior ranks were vacant" at the end of 2020; and the average age of career soldiers has risen three years since 2012 to 33.4 years.²⁰² In April 2021, Germany started a yearlong "voluntary military service in homeland security" program that mixes combat training with specialist training to prepare 1,000 young Germans per year to deal with pandemics or natural disasters and protect critical infrastructure.²⁰³

In March 2020, Germany announced that it will purchase 90 Eurofighter Typhoons and 45 F/A-18E/F Super Hornets to replace its fleet of Tornados.²⁰⁴ It will cost almost €9 billion to keep Germany's Tornados in the air until their scheduled retirement in 2031.²⁰⁵ Their replacement will need to be able to carry both nuclear and conventional weapons, as the Tornados are dual-capable aircraft equipped to carry B61 tactical nuclear weapons in addition to conventional payloads.²⁰⁶ The U.S. and Germany have already tested the Tornado's ability to carry the new B61-12 tactical nuke.²⁰⁷

Although the Super Hornets are not yet certified to carry the B61 tactical weapons, Germany is planning on the Super Hornets as their dual-capable aircraft.²⁰⁸ Of the 45 Super Hornets, 15 will be an EA-18 Growler electronic warfare variant.²⁰⁹ However, the Defence Ministry's announcement is a "recommendation and not a commitment. According to MoD statements, the government currently plans

to introduce supporting documents to parliament in 2022 or 2023.”²¹⁰

The next German government will decide on the fate of the nation’s sharing posture. Germany, France, Italy, and Spain plan to acquire a collective fleet of Eurodrones.²¹¹ The Bundestag approved funding for the program in April 2021, but the nation cannot purchase ammunition for the drones, and operators cannot receive “tactical weapons training,” which leaves German drones, once procured, “weaponless for now.”²¹²

In March, the Ministry of Defence announced plans to upgrade its Patriot missiles to keep them in service until 2030 and to invest in drone technology rather than a next-generation air defense platform.²¹³

Germany operates the largest fleet of heavy transport aircraft in Europe²¹⁴ and has taken delivery of 35 of 53 A400M cargo aircraft ordered.²¹⁵ Germany is upgrading its fleet with funds made available in December 2020. According to the Ministry of Defence, “Aircraft that were previously only usable for logistical missions are to be made capable of tactical missions through additional equipment and preparations.”²¹⁶

In May 2018, the U.S. approved the sale of six C-130J Hercules aircraft and three KC-130J tankers to France and Germany, which are planning to create a joint capability.²¹⁷ A new joint training center for both aircraft in Normandy will break ground in 2021 and begin operations in 2024.²¹⁸ In June 2020, Germany announced an end to its P-3C ORION maritime patrol aircraft (MPA) modernization program.

In March 2021, the U.S. approved the sale of the P-8A Poseidon to Germany. As this book was being prepared for publication, a decision had not been made, but German procurement of the P-8 seems likely.²¹⁹

France. France has one of the most capable militaries within the NATO alliance and retains an independent nuclear deterrent capability. France rejoined NATO’s Integrated Command Structure in 2009 but remains outside the alliance’s nuclear planning group.

In 2020, France spent 2.04 percent of GDP on defense and 26.5 percent of defense spending on equipment, meeting both NATO benchmarks.²²⁰ France has safeguarded planned defense spending increases of \$2 billion in 2021. According to *Defense News*:

The €49.7 billion French defense budget for 2021 includes payment appropriations of €39.2 billion, which is an increase from the previous year, as planned in the 2019–2025 military program law. Of this, a record €22.3 billion is earmarked for modernizing equipment and buildings; €12.3 billion will go toward wages; and €4.6 billion is appropriated for operating costs.²²¹

While France has been increasing defense spending, one-third of the planned increases are not set to take effect until 2023 after the next general election, and a budgetary review set for this year. One major project is an upgrade to the French sea-based and air-based nuclear deterrent. The nation test fired the M51.2, the current three-stage, sea-land strategic ballistic missile (without a warhead) in April 2021 as part of a development program for the M51.3, which is expected in 2025.²²²

France’s sea-based deterrent is provided by four *Le Triomphant*-class ballistic missile submarines.²²³ The government launched the country’s third-generation ballistic missile submarine program in February 2021. Delivery of the first submarine is planned for 2035, with three additional subs to be delivered every five years thereafter.²²⁴ Armed Forces Minister Florence Parly has described the third-generation submarines in colorful terms as able to “hear better and defend themselves better whilst at the same time being more silent: They will not make more noise than a school of shrimp.”²²⁵

Other major naval procurements include \$1.09 billion through 2025 for the design phase of a new nuclear-powered aircraft carrier that will deploy 30 future combat aircraft systems and is planned to enter service in 2038.²²⁶ The

Suffren, the first of six new fifth-generation Barracuda-class nuclear-powered attack submarines, was commissioned in November 2020.²²⁷ France is procuring five defense and intervention frigates, with the first due in 2024 and the second and third in 2025.²²⁸ The *Alsace*, a FREMM multi-mission frigate delivered in April 2021, and the *Lorraine*, which is to be delivered in 2022, will have enhanced air defense capabilities in addition to the focus on anti-submarine warfare that characterizes the six FREMMs that were delivered between 2012 and 2019.²²⁹

In November 2020, Armed Forces Minister Parly announced the overhaul of the entire mine countermeasures systems by 2029.²³⁰ In the same month, France and the U.K. signed a production contract for the joint Maritime Mine Counter Measure (MMCM) autonomous minehunting system.²³¹

Army procurements include Kochi HK416 Assault Rifles,²³² 300 ANAFI USA micro-drones,²³³ and Serval Armored Vehicles, with 108 of the 364 Servals that have been procured to be delivered by 2022.²³⁴

Air Force procurements include an upgrade to the aerial refueling and airlift fleet. In February 2020, France received the second of two KC-130J Super Hercules.²³⁵ It also has been introducing new A330 MRTT Multi-Role Tanker Transport aircraft and as of April 30, 2021, had received three of a dozen ordered.²³⁶ France received its 18th A400M Atlas military transport aircraft in April 2021 and plans to have 25 in service by 2025.²³⁷ In October 2020, the government announced that the final 10 NH90 Tactical Troop Helicopters on order for delivery in 2025 and 2026 would be upgraded to meet special forces requirements.²³⁸

In January 2019, France signed a \$2.3 billion agreement with Dassault Aviation for development of the F4 Standard upgrade to the Rafale fighter aircraft. The upgrade includes “a number of new features, the most important of which is an improvement in the aircraft’s connectivity in both national and allied contexts, through software-defined radio, new links, and satellite communications.”²³⁹ The 28 Rafales,

to be delivered in 2025, “will include some F4 functionalities.”²⁴⁰ An additional 30 Rafales at full F4 configuration will be delivered by 2030.²⁴¹ It is expected that “[t]he F4 version will significantly improve the 4.5-generation fighter’s stealth capabilities, which although present in earlier versions to some extent failed to compete with fifth-generation combat aircraft.”²⁴²

In February 2021, France signed a contract to procure an additional 12 Rafales at the F3R standard by 2025 to replace fighters that had recently been sold to Greece.²⁴³ In May 2021, France, Germany, and Spain signed an agreement on the Future Combat Air System, which is to begin entering service in 2040.²⁴⁴

France established a 220-person Space Command under the Air Force in September 2019 and has committed to investing \$4.78 billion in its space capabilities by 2025.²⁴⁵ In January 2021, NATO approved a Center of Excellence for Military Space to be located alongside French Space Command in Toulouse.²⁴⁶ The first researchers arrived in 2021, and the center is to be fully staffed by 2025.²⁴⁷

France intends to have a “fully capable” system to defend its assets in space in place by 2030. “If our satellites are threatened,” Armed Forces Minister Parly has said, “we intend to blind those of our adversaries. We reserve the right and the means to be able to respond: that could imply the use of powerful lasers deployed from our satellites or from patrolling nano-satellites.”²⁴⁸ In March 2021, with German and U.S. space forces also participating, France launched its first military exercise in space “to evaluate its ability to defend its satellites and other defense equipment from an attack.”²⁴⁹

In December 2016, France opened a cyber-operational command.²⁵⁰ The French Military Programming Law for 2019–2025, enacted in the summer of 2018, added “an additional 1.6 billion euros for cyber operations along with 1,500 additional personnel for a total of 4,000 cyber combatants by 2025,” and in January 2019, France issued its “first doctrine for offensive cyber operations.”²⁵¹

France, which has the third-largest number of active-duty personnel in NATO,²⁵² withdrew the last of its troops from Afghanistan at the end of 2014, although all French combat troops had left in 2012. France continues to remain engaged in the fight against the Islamic State, deploying 600 troops in Operation Chammal.²⁵³ In February 2021, the *Charles de Gaulle* Carrier Strike Group deployed on a four-month operational deployment that includes support to Operation Chammal.²⁵⁴ In April 2021, the *Charles de Gaulle* Carrier Strike Group and *Dwight D. Eisenhower* Carrier Strike Group conducted dual operations in the Arabian Sea.²⁵⁵

France's contributions to NATO deterrence missions in Eastern Europe include deployment of 337 soldiers to Estonia as part of NATO's Enhanced Forward Presence.²⁵⁶ France also has taken part in Baltic Air Policing eight times, most recently flying out of Estonia beginning in April 2020,²⁵⁷ and is preparing for high-intensity warfare with a full-scale divisional exercise Orion for 2023 that could involve up to 10,000 troops in addition to air and naval units.²⁵⁸

The French military is also very active in Africa with more than 5,100 troops involved in anti-terrorism operations in Burkina Faso, Chad, Mali, Mauritania, and Niger as part of Operation Barkhane and more than 1,450 troops stationed in Djibouti, 950 in Côte d'Ivoire, 350 in Gabon, and 350 in Senegal.²⁵⁹ In addition, France has a close relationship with the United Arab Emirates. It has 650 troops stationed in the UAE,²⁶⁰ and a 15-year defense agreement between the countries has been in effect since 2012.

France is part of the EU-led Operation Sophia in the Mediterranean in response to human smuggling and other migration-related problems and is involved in other maritime missions across the globe.²⁶¹ It organized the April 2021 Le Pérouse naval exercise in the Bay of Bengal, which also included ships from Australia, Japan, India, and the U.S.²⁶² France also conducts occasional freedom-of-navigation operations in the Pacific. In February 2021, for example, it announced that it was sending

a nuclear-propelled attack submarine and warship on an eight-month mission to the Indian and Pacific Oceans.²⁶³

The French-led Awareness Strait of Hormuz initiative to help patrol the waters near Iran, based out of Abu Dhabi, became operational on February 25, 2020. The mandate for the initiative's military mission, Operation Agenor, was extended through 2021.²⁶⁴

Operation Sentinelle, launched in January 2015 to protect the country from terrorist attacks, is the largest operational commitment of French forces. Sentinelle and Operation Resilience, launched in March 2020 to help combat coronavirus,²⁶⁵ together represent a domestic commitment of 13,000 French forces.

In response to a series of terrorist attacks in southern France in October 2020, President Macron increased the number of troops deployed for Operation Sentinelle from 3,000 to 7,000.²⁶⁶ This decision could have a negative impact on overall readiness as one analysis notes. The IISS has noted that in "mid-2020, the army issued a strategy document, 'Operational Superiority 2030', which called for improved readiness in light of the risk of high-intensity conflict" but that "these plans could be affected by the decision, in October, to deploy more troops on the domestic Operation Sentinel mission."²⁶⁷ Frequent deployments, especially in Operation Sentinelle, have placed significant strains on French forces and equipment.²⁶⁸

The United Kingdom. America's most important bilateral relationship in Europe is its Special Relationship with the United Kingdom. From the sharing of intelligence to the transfer of nuclear technology, a high degree of military cooperation has helped to make the Special Relationship between the U.S. and the U.K. unique.

In 2020, the U.K. spent 2.32 percent of GDP on defense and 23.0 percent of its defense budget on equipment.²⁶⁹ In November 2020, the government announced plans to spend an additional "projected total of nearly \$22 billion" on defense across the next four years. "[T]his additional funding is on top of a

previous commitment to add \$2 billion more to the country's defense budget, with the combined planned increase being approximately \$24.1 billion through 2024."²⁷⁰ The new funding will be used in part for acquisitions, including frigates, Type 32 warships, and the U.K.'s Future Combat Air System. The U.K. is also standing up a Space Command and an Artificial Intelligence Center.²⁷¹

A 2020 report from the National Audit Office, however, warned that the U.K.'s 10-year defense modernization program could face a budget shortfall of as much as £13 billion (\$15 billion).²⁷² Defence Secretary Ben Wallace stated that the U.K. would need to make some "tough choices":

The decades of funding deferrals were about to hit the buffers. Bogus efficiencies, savings targets, hollowing out, and the lasting impacts of fighting the Iraq and Afghanistan conflicts are all things that continue to drain away precious resources long after the political leadership that directed them have exited the stage.²⁷³

In March 2021, the U.K. released its Integrated Review of Security, Defence, Development and Foreign Policy as well as a Defence Command Paper.²⁷⁴ The Defence Ministry's Command Paper, which lays out a plan for military modernization, includes plans for the creation of a new special operations Army Ranger Regiment that will "be able to operate discreetly in high-risk environments and be rapidly deployable across the world" and a new naval surveillance ship "aimed at protecting Britain's undersea cables and other critical national infrastructure."²⁷⁵

The paper also specifies significant cuts in capability, including a likely reduction in the planned procurement of 138 F-35s and the early retirement of C-130J transport aircraft. In addition, the U.K. army would be reduced from its current 82,000 troops to 72,500 troops by 2025—the smallest it has been since 1714.²⁷⁶ However, one analysis argues that the Army

reduction "is less than might appear" because "the Army has been well below its planned personnel numbers for some years."²⁷⁷ The loss of the C-130J will be felt as "[t]hese aircraft had been particularly favoured for Special Forces roles, which will now fall to the considerably larger A400M Atlas."²⁷⁸

Although the number of its active-duty servicemembers is small in comparison to the militaries of France and Germany, the U.K. maintains European NATO's most effective armed forces. Nevertheless, the Army admitted in October 2020 that it would miss targets set down in the 2015 Strategic Defence and Security Review (SDSR) to field a fully capable division with three brigades by 2025 (this will not take place now until the early 2030s).²⁷⁹ Because of procurement delays and funding issues, the Army will "only be able to deploy a combat division consisting of just a single armoured infantry brigade and an interim manoeuvre support brigade."²⁸⁰ As explained by Ben Barry of the IISS:

The Army was mandated [in the 2015 review] to deliver two armored infantry brigades, whereas they are now saying they can only generate one. They have enough vehicles for three infantry armored brigades, but my very strong suspicion is they haven't been spending money on spares. If they haven't got sufficient spare parts they will only risk sending one brigade on operations.²⁸¹

In early 2021, the Defence Ministry announced that it had been granted observer status for the Franco-German Main Ground Combat System program, which is slated to replace French and German Main Battle Tanks "around 2035."²⁸² In April 2019, the U.K. reported that it was planning to upgrade only 148 of its 227 remaining Challenger 2 main battle tanks, cutting its fleet by a third.²⁸³ The 79 other tanks would be scavenged for spare parts.²⁸⁴ Because Challenger tanks are not currently manufactured, sourcing spare parts is a continual problem.²⁸⁵ The British Army had

previously cut its tank forces by 40 percent in 2010.²⁸⁶ The Defence Command Paper laid out plans to spend £1.3 billion on upgrades to elevate the Challenger 2 to the Challenger 3.²⁸⁷ One former U.K. tank officer recently wrote that the small number of U.K. tanks available means that “our armoured brigades can only play a bit part in someone else’s military in alliance or coalition.”²⁸⁸

In March 2021, the U.K. announced that it would no longer upgrade its Warrior armored vehicles, but that they would remain in service through the mid-2020s.²⁸⁹ In 2019, the U.K. signed a £2.8 billion deal to procure around 500 Boxer armored vehicles.²⁹⁰ As a result of the decision to stop upgrading the heavier Warriors, the Army is “conducting an analysis on potential lethality enhancements of Boxer vehicle.”²⁹¹

As of March 2021, the U.K. had taken delivery of 21 F-35Bs of 48 ordered.²⁹² The total number of F-35s that will be procured may not be known until 2025.²⁹³ RAF F-35s based at Akrotiri, Cyprus, flew operational sorties for the first time in June 2019.²⁹⁴ In 2019, the U.K. took delivery of the last of 160 Typhoon aircraft, all of which were expected to stay in service until 2040.²⁹⁵ However, in March, the U.K. announced that 24 Tranche 1 Typhoons will be retired by 2025.²⁹⁶ Project Centurion, a \$515.83 million Typhoon upgrade to integrate additional Storm Shadow long-range cruise missiles and Brimstone precision attack missiles, was completed in 2018 and enabled the U.K. to retire its fleet of Tornado aircraft.²⁹⁷ The U.K. recently detailed a £2 billion investment over the next four years in development of the Tempest, a sixth-generation fighter to be delivered in 2035.²⁹⁸

The RAF operates the largest fleet of air-to-air refuelers in Europe, which is noteworthy because of the severe shortage of this capability on the continent.²⁹⁹ Along with the U.K., the U.S. has produced and jointly operated an intelligence-gathering platform, the RC-135 Rivet Joint aircraft, which has already seen service in Mali, Nigeria, and Iraq and is now part of the RAF fleet.³⁰⁰

The U.K. operates seven C-17 cargo planes and has started to bring the European A400M cargo aircraft into service after years of delays. By April 2021, Britain had taken delivery of 20 of 22 A400M heavy transport aircraft ordered.³⁰¹

The Sentinel R1, an airborne battlefield and ground surveillance aircraft, flew its last operational flight in February 2021.³⁰² That same month, the U.K. took delivery of the fifth of nine P-8 Poseidon maritime patrol aircraft (MPA) that are to be based at RAF Lossiemouth in Scotland. The order will be completed by the end of the year.³⁰³ In 2018, retired Air Vice-Marshal Andrew Roberts testified to Parliament that “capable though the P-8 may be, the number of aircraft planned is undoubtedly inadequate to fulfil even the highest priority tasks likely to be assigned to the force in tension and hostilities.”³⁰⁴

The U.K. reportedly also plans to procure approximately 45 medium helicopters to remain in service until the mid-2040s. This platform will replace four different helicopter platforms currently in service.³⁰⁵

The Royal Navy has lost 40 percent of its fleet since the end of the Cold War.³⁰⁶ Of the 55 ships lost since the early 1980s, half are frigates, and the U.K. now operates only 13.³⁰⁷ In five years, the Royal Navy will have only 10 frigates.³⁰⁸ According to one analyst, such a force “can’t possibly handle all of [the] tasks [required of it]. Especially considering that, at any given time, just a third of the vessels will be available for operations. The others will be in maintenance or refit or working up for deployments.”³⁰⁹ However, as construction of destroyers and frigates picks up steam, “the ambition is to rebuild to more than 20 by the end of the decade.”³¹⁰

The Royal Navy’s surface fleet is based on the new Type-45 destroyer and the older Type-23 frigate. The latter will be replaced by eight Type-26 Global Combat Ships sometime in the 2020s.³¹¹ The Type-26 Global Combat Ships are meant to handle a flexible range of tasks, but it remains unclear whether all of their weapons capabilities will be funded.³¹² The U.K.

announced a procurement of five T31e frigates, which are scheduled to enter service in 2023,³¹³ the year the first of the Type-23 frigates is slated to be phased out of service.³¹⁴

HMS *Queen Elizabeth* set sail on its first operational deployment in May 2021.³¹⁵ The Carrier Strike Group deployment, which includes a U.S. destroyer and a Dutch frigate, will “last for 28 weeks and cover 26,000nm” and “will include visits to the waters of more than 40 countries” and “a wide range of exercise and joint operations.” Specifically, “Queen Elizabeth is scheduled to conduct dual-carrier operations in the Mediterranean with the French carrier Charles de Gaulle, as well as exercise with a number of navies, including that of Israel. Elements of the CSG will also conduct maritime security operations in the Black Sea.” In addition:

F-35B fighters from the carrier are expected to fly combat missions over Syria and Iraq from the eastern Mediterranean as part of Operation Shader, the UK’s contribution to the anti-Daesh campaign. The CSG will then move further east to the Indian and Pacific Oceans, exercising with the UAE along the way and visiting India. Further visits are planned to Japan, South Korea, and Singapore, underlining the United Kingdom’s new shift in defense focus towards the Pacific. The group will participate in Exercise Bersama Lima with forces from Australia, Malaysia, New Zealand, and Singapore. The exercise coincides with the 50th anniversary of the Five Powers Defence Agreement between the five nations.³¹⁶

The U.K.’s *Queen Elizabeth*-class carriers are the largest operated in Europe. A second in this class, HMS *Prince of Wales*, will be the larger of the two carriers and was commissioned in December 2019.³¹⁷ However, the *Prince of Wales* has been beset by a series of leaks that have cost £3.3 million and necessitated the cancellation of planned fixed-wing sea trials with F-35s off the U.S. east coast that

were scheduled for January 2021.³¹⁸ The *Prince of Wales* returned to the sea in May 2021 after five months of repairs.³¹⁹ Each carrier is capable of supporting 36 F-35s, but the U.K. currently plans to procure only 48.³²⁰

The Royal Navy is also introducing seven *Astute*-class attack submarines as it phases out its older *Trafalgar*-class subs. The fifth *Astute*-class submarine was launched in April 2021.³²¹ Crucially, the U.K. maintains a fleet of 13 Mine Counter Measure Vessels (MCMVs) that deliver world-leading capability. As a supplement, the U.K. began minehunting and survey operations using unmanned surface vessels (USVs) in March 2020.³²²

Perhaps the Royal Navy’s most important contribution is its continuous-at-sea, submarine-based nuclear deterrent based on the *Vanguard*-class ballistic missile submarine and the Trident missile. In July 2016, the House of Commons voted to renew Trident and approved the manufacture of four replacement submarines to carry the missile.

The U.K. plans to procure four new *Dreadnought*-class ballistic missile submarines, which are expected to have a 30-year life span, at a cost of £31 billion (plus an additional contingency funding stream of £10 billion for any potential cost overruns), with a completion date of the early 2030s for the first, HMS *Valiant*.³²³ In May 2021, the Ministry of Defence ordered a review of the program because of delays that continue to push back the date of completion.³²⁴

U.K. defense forces have been plagued in recent years by vacancies. “The personnel strength of the British armed forces continues to decrease,” according to the IISS, “with an overall deficit of 7.6% in 2019, compared with 6.2% the previous year. Although recruitment initiatives continue, shortages remain in key specialist areas, including 18% of required Royal Air Force (RAF) pilots.”³²⁵ However, initial reports suggest that the pandemic may have helped to fuel an increase in military recruitment in 2020.³²⁶

Despite these issues, the U.K. remains a leader inside NATO, serving as the framework

nation for NATO's EFP in Estonia and a contributing nation for the U.S.-led EFP in Poland. The Royal Air Force has taken part in Baltic Air Policing six times since 2004, most recently in May–August 2020.³²⁷ In April 2021, four RAF Typhoons were deployed to Romania to take part in NATO's enhanced Air Policing (eAP), the third time the RAF has participated in eAP since 2017.³²⁸ From November–December 2019, four U.K. typhoons and 120 personnel took part in Icelandic Air Policing.³²⁹

Before its withdrawal early in 2021, the U.K. maintained a force of 750 troops in Afghanistan as part of NATO's Resolute Support Mission.³³⁰ It also contributes to NATO's Kosovo Force;³³¹ NATO's Mine Countermeasures Group One;³³² and, as an active part of the anti-ISIS coalition, Operation Shader.³³³ In February 2021, the U.K. announced that it planned to increase the number of British troops (currently "about 100 soldiers") engaged in training Iraqi security forces.³³⁴

Italy. Italy hosts some of the U.S.'s most important bases in Europe, including the headquarters of the 6th Fleet. It also has NATO's fifth-largest military³³⁵ and one of its more capable despite continued lackluster defense investment. In 2020, Italy spent only 1.39 percent of GDP on defense, but it did spend 24.6 percent of its defense budget on equipment, meeting the second NATO spending benchmark.³³⁶ Italy will increase its defense budget by 9.6 percent in 2021, a \$1.7 billion year-over-year increase. Procurement spending will increase about 26 percent in 2021 over 2020 levels, and "Maintenance and Operations rises 23 percent to €2.15 billion."³³⁷

Key procurements include 150 Centauro II 8x8 tank destroyers, 650 Lince 2 light multi-role vehicles, 156 VBM Freccia 8x8 infantry combat vehicles, T-345 and T-346 jet trainers, Italy's first HH-101 Combat Search and Rescue helicopter, and 16 CH-47F helicopters.³³⁸ Italy also plans to purchase 60 F-35As for the air force and 30 F-35Bs; the F-35Bs will be divided equally between the air force and navy.³³⁹ A government-owned plant for final assembly of the F-35 is located in Cameri, Italy.

In December 2020, Italy signed the Future Combat Air System (FCAS) Cooperation agreement with Sweden and the U.K. The agreement covers "the cooperation for research, development, and 'joint-concepting'" of the sixth-generation *Tempest* fighter.³⁴⁰ In April, Italy's Military Chief of Staff General Enzo Vecciarelli suggested that the *Tempest* might possibly employ directed energy weapons to defeat hypersonic missiles.³⁴¹

Key naval procurements include plans for four U212A submarines, "a special operations & diving operations/Submarine Rescue Ship," and a new anti-ship missile system.³⁴² Italy launched the last of 10 new FREMM frigates in January 2020.³⁴³ For the Italian Navy, "[t]he expected retirement of much of the naval fleet has triggered a long-term replacement plan which includes the potential acquisition of two next-generation destroyers to replace the ageing Luigi Durand de la Penne-class vessels."³⁴⁴

The Ministry of Defence's "Multi-year Planning Document 2020–2022," released in November 2020, launched "de-risking studies for two next generation destroyers under the DDX program to replace the Navy's two *Admiral*-class destroyers," with the new destroyers to be delivered in 2028.³⁴⁵ Other defense priorities include acquiring a "multi-mission, multi-sensor" Gulfstream G-550 jet for "command-and-control, 'electronic superiority' and 'electronic protection of forces.'"; the launch of new surveillance and communications satellites; and needed munitions.³⁴⁶

Italy's focus is the Mediterranean region where it participates in a number of stabilization missions including NATO's Sea Guardian,³⁴⁷ the EU's Operation Sophia,³⁴⁸ and the Italian Navy's own Operation Mare Sicuro (Safe Sea) off the Libyan coast.³⁴⁹ Additionally, 400 Italian troops are part of the bilateral Mission of Assistance of Support in both Misrata and Tripoli.³⁵⁰

Despite a southern focus, Italy contributes to Standing NATO Mine Countermeasures Group Two³⁵¹ as well as the EFP battalion in Latvia (200 troops);³⁵² previously NATO's Resolute Support mission in Afghanistan

(895 troops),³⁵³ and Operation Prima Parthica (600 troops, partly to help train Iraqi Security Forces).³⁵⁴ Italian Tornado jets operating out of the Ahmed Al Jaber airbase in Kuwait are performing reconnaissance missions in support of the coalition to defeat the IS.³⁵⁵ With 542 troops, Italy is the second largest contributor to KFOR after the United States.³⁵⁶

The Italian Air Force has taken part in Baltic Air Policing five times, most recently with Italian Typhoons operating out of Lithuania from September 2020–April 2021.³⁵⁷ In April 2021, Italy deployed four F-35As to Estonia, marking the first time the F-35 has taken part in Baltic Air Policing.³⁵⁸ From May–August 2019, Italy’s air force took part in NATO’s enhanced Air Policing in Romania, having previously participated in “a four-month enhanced Air Policing deployment to Bulgaria in 2017.”³⁵⁹ The Italian Air Force has deployed to Iceland to perform air patrols six times since 2013, most recently in June–July 2020 when six F-35As were deployed to Iceland.³⁶⁰

Poland. Situated in the center of Europe, Poland shares a border with four NATO allies, a long border with Belarus and Ukraine, and a 144-mile border with Russia’s Kaliningrad Oblast, a Russian enclave between Poland and Lithuania on the Baltic Sea. Poland also has a 65-mile border with Lithuania, making it the only NATO member state that borders any of the Baltic States, and NATO’s contingency plans for liberating the Baltic States in the event of a Russian invasion reportedly rely heavily on Polish troops and ports.³⁶¹

Poland has an active military force of 114,050 including a 58,500-person army with 808 main battle tanks.³⁶² Poland also has a Territorial Defense Force (TDF) that is intended “to increase the strength of the armed forces and the defense capabilities of the country,” according to former Minister of Defense Antoni Macierewicz, and “is also the best response to the dangers of a hybrid war like the one following Russia’s aggression in Ukraine.”³⁶³ The TDF is mostly volunteer; “its personnel combine their civilian careers with limited military service of a minimum of two days twice a month

and an annual two-week camp.”³⁶⁴ Its planned 17 brigades will be distributed across the country.³⁶⁵ The force, which will number 53,000 by 2026,³⁶⁶ constitutes the fifth branch of the Polish military, subordinate to the Minister of Defense.³⁶⁷ National Defense Minister Mariusz Blaszczak has stated that the TDF’s performance combating COVID-19 has “impeccably proved their importance and effectiveness.”³⁶⁸

Poland is also investing in cyber capabilities. “Plans for a 2,000-strong cyberdefence force were also unveiled in 2019,” according to the IISS *Military Balance*. “Centralised within the defence ministry, this force is due to be operational before 2025. A cyber component was also set up in the TDF in 2019.”³⁶⁹ In November 2020, the U.S. and Poland signed an enhanced defense cooperation agreement that increased the number of U.S. forces stationed in Poland by 1,000.

In 2019, Poland spent 2.31 percent of GDP on defense and 29.0 percent of its defense budget on equipment, reaching both NATO benchmarks.³⁷⁰ Pursuant to increases in defense spending adopted in October 2017, Poland should be spending 2.5 percent of GDP on defense in 2030.³⁷¹ In January 2021, Minister Blaszczak stated that Poland remained committed to 2 percent but that “[t]he COVID-19 pandemic will most likely have an impact on national security policies, including defense budgets.”³⁷²

Poland is making major investments in military modernization and is planning to spend \$133 billion on new capabilities by 2035, as envisioned in the Defense Ministry’s Technical Modernization Plan for 2021–2035, which was signed in October 2019.³⁷³ In addition, several major acquisitions have been announced in recent years. For example:

- In January 2020, Poland signed a \$4.6 billion deal to purchase 32 F-35As with “deliveries from 2026.”³⁷⁴ A group of 24 Polish pilots completed F-35 simulator training in Arizona early in 2021.³⁷⁵ Poland has announced that the F-35s will be based in Lask.³⁷⁶

- In March 2018, in the largest procurement contract in its history, Poland signed a \$4.75 billion deal for two Patriot missile batteries.³⁷⁷ The Patriot batteries are scheduled for delivery between 2022 and 2025.³⁷⁸
- In February 2019, Poland signed a \$414 million deal to purchase 20 high-mobility artillery rocket systems from the U.S. for delivery by 2023.³⁷⁹
- In April 2019, it signed a \$430 million deal to buy four AW101 helicopters that will provide anti-submarine warfare and search-and-rescue capabilities and are to be delivered by the end of 2022.³⁸⁰
- In February 2018, Poland joined an eight-nation “coalition of NATO countries seeking to jointly buy a fleet of maritime surveillance aircraft.”³⁸¹
- Poland has been in negotiations to purchase 180 Javelin anti-tank weapons. In March 2020, the State Department approved the potential sale, which would be worth \$100 million.³⁸²
- In April 2021, the U.S. and Poland signed an agreement for Poland to acquire five retrofitted C-130H Hercules transport aircraft (decommissioned by the U.S. in 2017) by 2024, with the first to arrive by the end of 2021.³⁸³
- In July 2021, Poland announced a deal to procure 250 M1A2 Abrams SEPv3 tanks with deliveries to begin in 2022.³⁸⁴

Although Poland’s focus is territorial defense, it had 290 troops deployed in Afghanistan as part of NATO’s Resolute Support Mission.³⁸⁵ Poland’s air force has taken part in Baltic Air Policing nine times since 2006, most recently operating four F-16s out of Ämari Air Base in Estonia from January–April 2020.³⁸⁶ In 2020, Poland was the lead for NATO’s VJTF,

and approximately half of the 6,000 troops in the VJTF’s Spearhead Force were Polish.³⁸⁷ Poland also is part of NATO’s EFP in Latvia³⁸⁸ and has 229 troops in NATO’s KFOR mission in Kosovo.³⁸⁹

In addition, “up to 350 soldiers and employees” are deployed to Iraq, Jordan, Kuwait, and Qatar as part of Operation Inherent Resolve.³⁹⁰ In April 2021, around 80 Polish soldiers deployed to Turkey as part of a NATO assurance mission to assist Turkey by providing additional maritime patrols over the Black Sea and the Mediterranean.³⁹¹ Finally, Poland’s commitment to NATO’s tailored forward presence in Bulgaria and Romania includes about 250 soldiers and civilians.³⁹²

Turkey. Turkey remains an important U.S. ally and NATO member, but the increasingly autocratic presidency of Recep Tayyip Erdogan and a thaw in relations between Turkey and Russia have introduced troubling challenges. Turkey has been an important U.S. ally since the closing days of World War II. During the Korean War, it deployed 15,000 troops and suffered 721 killed in action and more than 2,000 wounded. Turkey joined NATO in 1952, one of only two NATO members (the other was Norway) that had a land border with the Soviet Union. Today, it continues to play an active role in the alliance, but not without difficulties.

Following an attempted coup in July 2016, thousands of academics, teachers, journalists, judges, prosecutors, bureaucrats, and soldiers were fired or arrested. Specifically, according to a Reuters account, “some 80,000 people were held pending trial and some 150,000 civil servants, military personnel and others were sacked or suspended. More than 20,000 people have been expelled from the Turkish military.”³⁹³ In May 2019, according to Deutsche Welle, observers estimated that “3,000 inmates are being held in isolation.”³⁹⁴

The post-coup crackdown has had an especially negative effect on the military. As noted, 20,000 members have been dismissed since 2016 with deleterious effects on those remaining.³⁹⁵ The IISS reported that “[t]he effect on officer morale of these continuing purges was

exacerbated by the widespread suspicion that promotions and appointments were increasingly politicised, with outspoken supporters of Erdogan fast-tracked for promotion.”³⁹⁶ In April 2021, Turkish authorities detained 10 former admirals that were part of a group of more than 100 retired naval officers who, in an open letter, criticized a government plan to construct a canal in Istanbul.³⁹⁷

Turkey’s military is now suffering from a loss of experienced generals and admirals as well as an acute shortage of pilots. The dismissal of more than 300 F-16 pilots, for instance, greatly exacerbated existing pilot shortages.³⁹⁸ A third of the dismissed pilots were in the leadership echelon, commanding squadrons, fleets, or bases.³⁹⁹ A request to the U.S. to send trainers was denied, as was a Turkish plan to utilize Pakistani trainers to fly the F-16.⁴⁰⁰ Furthermore, as one analyst notes, “The shortage of pilots was not the only problem. Many of the veteran staff members, especially at the operations and logistics centers that help pilots fly successful missions, were also removed, hampering the close coordination between the air and land elements of the air force. Hundreds of engineers on the ground were also removed.”⁴⁰¹

The dilapidated condition of its air force is partly why Turkey has decided to acquire new ground-based air defense systems.⁴⁰² In December 2017, Turkey signed a \$2.5 billion agreement with Russia to purchase S-400 air defense systems, and delivery began in July 2019.⁴⁰³ “The decision to purchase two S-400 air-defence systems from Russia,” reports the IISS, “was made by the president without detailed consultation with the armed forces about the possible technical and strategic repercussions.”⁴⁰⁴ U.S. officials have expressed grave concerns about this purchase and suspended Turkey from the F-35 program in July 2019, stating that “[t]he F-35 cannot coexist with a Russian intelligence collection platform that will be used to learn about its advanced capabilities.”⁴⁰⁵

Turkey tested the system against its F-16s in November 2019 and further tested the system at Sinop near the Black Sea in October 2020.⁴⁰⁶

In December, a U.S. official stated, “We object to Turkey’s purchase of the system and are deeply concerned with reports that Turkey is bringing it into operation.”⁴⁰⁷ That same month, in response to Turkey’s purchase of the S-400 systems, the U.S. announced sanctions that would take effect in April 2021.⁴⁰⁸ Fearful of the likely effect of these sanctions, Turkey has been stockpiling spare F-16 parts since 2019.⁴⁰⁹

Turkish defense firms make “more than 800 components...for the F-35 as part of a nine-nation consortium,” and Turkey’s suspension from the program could cost the Turkish defense industry as much as \$10 billion.⁴¹⁰ (The U.S. Government Accountability Office specifies more precisely that 1,005 parts are produced by Turkish firms.⁴¹¹) Despite Turkey’s removal from the program, components of the F-35 will continue to be built in Turkey until 2022.⁴¹² In his posture statement to Congress, General Wolters downplayed the lasting potential of the Turkish–Russian rapprochement: “Turkey retains a pivotal role in countering Russia. Ankara’s relationship with Moscow remains competitive and transactional, with Turkish engagement often aimed at constraining Russian behavior.”⁴¹³

Partly because of its manned aircraft issues, Turkey is investing heavily in armed drones. These drones, of which it has approximately 130, have played a significant role in Turkish operations in Syria.⁴¹⁴ Here too, however, the country remains reliant on foreign companies. “While Turkish companies have assembled the drones,” according to the Congressional Research Service, “they apparently rely on Western countries for some key components, including engines, optical sensors, and camera systems.”⁴¹⁵

In October 2019, Turkey launched a major offensive in Syria against the Kurdish-led Syrian Democratic Forces (SDF), partly to create a buffer zone near the Turkish border. The largest Kurdish armed faction within the SDF is the People’s Protection Units (YPG), an offshoot of the Kurdistan Workers’ Party (PKK), a U.S.-designated terrorist group that has waged

war against Turkey off and on since 1984. The offensive led to the creation of a buffer zone jointly patrolled by Turkish and Russian forces following an agreement between Presidents Erdogan and Putin in Sochi.

In February 2020, Russian-backed Syrian regime forces launched an attack on Idlib, the last remaining stronghold of forces opposed to Assad. Turkish forces opposed the offensive and lost 36 soldiers before Turkey and Russia agreed to a cease-fire.⁴¹⁶ The cease-fire was extended in February 2021.⁴¹⁷

Turkish threats to renege on a 2016 agreement with the EU under which the EU paid Turkey to stop the flow of migrants to Europe are a consistent and enduring source of friction.⁴¹⁸ In addition, Turkey and Greece remain at odds over maritime boundaries and drilling rights between their two nations in the eastern Mediterranean as well as drilling rights off the Cypriot coast. Tensions flared in 2020, and maritime talks between Turkey and Greece are ongoing. Turkey is reportedly scouting a location in the Turkish Republic of Northern Cyprus for a naval base⁴¹⁹ and began flying UAVs out of Geçitkale Airport in December 2019.⁴²⁰

U.S. security interests in the region lend considerable importance to America's relationship with Turkey. Turkey is home to Incirlik Air Base, a major U.S. and NATO air base, but it was reported early in 2018 that U.S. combat operations at Incirlik had been significantly reduced and that the U.S. was considering permanent reductions. Restrictions on the use of Incirlik for operations in Syria have proven problematic. "[The] American operation to kill Islamic State leader Abu Bakr al-Baghdadi in Syria," for example, "saw U.S. forces use a base in Iraq instead of the much closer Incirlik, requiring a round trip of many hours."⁴²¹ The U.S. reportedly began reviewing plans to remove nuclear weapons from Incirlik in 2019, but no such decision has yet been made.⁴²²

U.S. officials, however, have sought to focus on the positive aspects of U.S.–Turkish bilateral relations. In December 2019, General Wolters noted that he "saw no cracks in the armor in Turkey's willingness to work side by side as

a NATO partner with us."⁴²³ Two positive signs have been the use of Turkey's Konya Air Base to support NATO AWACS aircraft involved in counter-ISIS operations⁴²⁴ and Spain's operation of a Patriot system in the Turkish city of Adana under NATO auspices.⁴²⁵ Turkey also hosts a crucial radar at Kurecik, which is part of NATO's BMD system, and the U.S. is reportedly building a second undisclosed site (site K) near Malatya, which is home to an AN/TPY-2 radar with a range of up to 1,800 miles.⁴²⁶

In January 2021, Turkey took over command of NATO's Very High Readiness Joint Task Force. According to NATO:

Built around Turkey's 66th Mechanised Infantry Brigade of around 4,200 troops, a total of around 6,400 soldiers will serve on the VJTF. Units from Albania, Hungary, Italy, Latvia, Montenegro, Poland, Romania, Slovakia, Spain, the UK, and the United States will also serve on the force, which is part of the alliance's larger NATO Response Force. Turkey has made substantial investments into the unit—amongst the most mobile in NATO—particularly in its logistics and ammunition requirements planning. The latest models of Turkish armed vehicles, anti-tank missiles and howitzers have been allocated to the force.⁴²⁷

Before May of 2021, Turkey maintained more than 600 troops in Afghanistan as part of NATO's Resolute Support Mission.⁴²⁸ The Turks also have contributed to a number of peacekeeping missions in the Balkans, still maintain 317 troops in Kosovo,⁴²⁹ and have participated in counterpiracy and counterterrorism missions off the Horn of Africa in addition to deploying planes, frigates, and submarines during the NATO-led operation in Libya. Turkey currently contributes to the Standing NATO Mine Countermeasures Group Two⁴³⁰ and Standing NATO Maritime Group Two.⁴³¹

Turkey has a 355,200-strong active-duty military,⁴³² which is NATO's second largest after that of the United States. However, in June 2019:

President Recep Tayyip Erdogan ratified a new law that reduced the length of compulsory military service from 12 to six months. On payment of a fee, compulsory service can be reduced further to one month of basic training. The changes were expected to reduce the overall size of the armed forces by around 35%, as part of Turkey's long-term plan to create compact and fully professional armed forces.⁴³³

Turkish defense procurement has become more convoluted and more directly tied to President Erdogan. A December 2017 decree placed the Undersecretariat for Defense Industries (SSB), which is responsible for procurement, under Erdogan's direct control.⁴³⁴ Since then, Turkey's defense procurement has suffered from a "brain drain." In January 2019, it was reported that 272 defense officials and engineers had left for jobs overseas since the change. Of the 81 who responded to an SSB survey, "41 percent are in the 26–30 age group. 'This highlights a trend among the relatively young professionals to seek new opportunities abroad,' one SSB official noted."⁴³⁵

Another challenge is continued reliance on foreign components despite a focus on indigenous procurement. For example, Turkey's procurement of 250 new Altay main battle tanks, the first of which had been scheduled for May 2020, is indefinitely delayed. The tank relies on a German-made engine and transmission, as well as French armor, but the technology transfer was not approved. Turkey has sought alternative suppliers such as South Korea and is looking to produce domestic components, but procurement remains delayed.⁴³⁶

Similarly, Turkey's procurement of 50 T-129 attack helicopters will likely be delayed for more than four years to wait for production of a domestic engine to replace one produced by American and British firms.⁴³⁷ Because of a lack of engines, Turkey has been unable to deliver 30 T129s to Pakistan as part of a 2018 deal, and Pakistan granted a further six-month extension in March 2021.⁴³⁸ Also in March 2021,

Turkey announced plans to produce a larger T929 helicopter gunship using a Ukrainian engine, but the helicopter "is not expected to make its first flight until 2024, and won't enter service until the end of the decade."⁴³⁹

Additionally, the French government has blocked development of anti-ballistic missiles because of Turkey's actions in Syria.⁴⁴⁰ President Erdogan has personally lobbied French President Macron to allow Turkey to purchase Eurosam's SAMP/T missile-defense systems.⁴⁴¹ After its removal from the F-35 program, Turkey is purportedly planning to produce a domestic fifth-generation jet, the TF-X National Combat Aircraft, by 2023.⁴⁴²

Other major procurements include 350 T-155 Fırtına 155mm self-propelled howitzers⁴⁴³ and six Type-214 submarines, the first of which will enter service in 2022 and the last of which is to be delivered in 2027.⁴⁴⁴

In February 2019, Turkey announced upgrades of four *Preveze*-class submarines, to take place from 2023–2027.⁴⁴⁵ In the same month, Turkey launched an intelligence-gathering ship, the TCG *Ufuk*, described by President Erdogan as the "eyes and ears of Turkey in the seas."⁴⁴⁶ In December 2019, the SSB released its "Strategic Plan 2019–2023," which in part sets targets of 75 percent of Turkish military needs being supplied domestically by 2023 and defense exports being increased to \$10.2 billion by 2023. The latter target is almost certainly not likely to be met.⁴⁴⁷ In 2020, Turkish exports declined by 17 percent to \$2.279 billion, down from \$2.74 billion in 2019.⁴⁴⁸

The Baltic States. The U.S. has a long history of championing the sovereignty and territorial integrity of the Baltic States that dates back to the interwar period of the 1920s. Since regaining their independence from Russia in the early 1990s, the Baltic States have been staunch supporters of the transatlantic relationship. Although small in absolute terms, the three countries contribute significantly to NATO in relative terms. In 2021, the U.S. will provide \$169 million in military aid to the Baltics.⁴⁴⁹

Estonia. Estonia has been a leader in the Baltics in terms of defense spending, with

defense spending equal to 2.33 percent of GDP and 25.4 percent of defense spending on new equipment in 2020,⁴⁵⁰ and will spend 2.29 percent of GDP on defense in 2021 after a defense budget increase of nearly \$36 million.⁴⁵¹ Estonia's Ministry of Defence Development Plan 2022–2025, released in March 2021, includes planned investments of €135 million for ammunition along with improved personal protection for soldiers, continued development of a modular field hospital, and continued procurement of self-propelled artillery, coastal defenses, and anti-tank weapons.⁴⁵²

Munitions are a major component of Estonian procurement. Estonia's Defense Investments Center, according to the head of its procurements department, will "concentrate on procuring long-range anti-tank missiles Spike, Mistral air defense missiles and small caliber munitions in the near future."⁴⁵³

Although the Estonian armed forces total only 7,100 active-duty service personnel (including the army, navy, and air force),⁴⁵⁴ they are held in high regard by their NATO partners and punch well above their weight inside the alliance. Between 2003 and 2011, 455 Estonians served in Iraq. Perhaps Estonia's most impressive deployment has been to Afghanistan: More than 2,000 Estonian troops were deployed between 2003 and 2014, and they sustained the second-highest number of deaths per capita among all 28 NATO members.

In 2015, Estonia reintroduced conscription for men ages 18–27, who must serve eight or 11 months before being added to the reserve rolls.⁴⁵⁵ The number of Estonian conscripts will increase from 3,200 to 4,000 by 2026.⁴⁵⁶

Estonia has demonstrated that it takes defense and security policy seriously, focusing on improving defensive capabilities at home while maintaining the ability to be a strategic actor abroad. Estonia is acquiring a total of 18 South Korean-built K9 self-propelled howitzers at a total cost of €66 million.⁴⁵⁷ It received the first units in October 2020, and the remaining units are scheduled to arrive by 2023.⁴⁵⁸ Estonia has prioritized anti-tank weapons and took

delivery of 128 Javelins from the United States in February 2020.⁴⁵⁹

In October 2020, Estonia withdrew from a joint armored vehicle development program with Latvia and Finland for financial reasons, putting off new armored vehicle acquisition until the end of the decade.⁴⁶⁰ In 2019, it received two C-145A tactical transport aircraft donated by the U.S.⁴⁶¹ In July 2019, Estonia signed a \$24 million deal to purchase 16,000 rifles from an American arms company, allowing the nation to phase out older Soviet and Israeli weapons.⁴⁶² Estonia has earmarked €46 million for mines and short-range to medium-range coastal defenses and has indicated an interest in joint procurement with Latvia.⁴⁶³

According to Estonia's National Defence Development Plan for 2017–2026, "the size of the rapid reaction structure will increase from the current 21,000 to over 24,400."⁴⁶⁴ In addition, Estonia's cyber command became operational in August 2018 and is expected to include 300 people when it reaches full operational capability in 2023.⁴⁶⁵ U.S. and Estonian cyber commands train together. In the fall of 2020, for example, they trained in Estonia to help search for and block incoming cyber threats from Russia.⁴⁶⁶

In 2017, Estonia and the U.S. strengthened their bilateral relationship by signing a defense cooperation agreement that builds on the NATO–Estonia Status of Forces Agreement, further clarifying the legal framework for U.S. troops in Estonia.⁴⁶⁷ Estonian forces have participated in a number of operations including 45 soldiers in Resolute Support before its end,⁴⁶⁸ a vessel as part of the Standing NATO Mine Countermeasures Group One,⁴⁶⁹ about 95 troops in the French-led Operation Barkhane in Mali,⁴⁷⁰ and a Special Forces contribution to France's Task Force Takuba in the Sahel, which began in the latter half of 2020.⁴⁷¹ Estonian troops also take part in the U.S.-led Operation Inherent Resolve in Iraq along with NATO Mission Iraq.⁴⁷²

Latvia. Latvia's recent military experience also has been centered on operations in Iraq and Afghanistan with NATO and U.S. forces.

Latvia deployed more than 3,000 troops to Afghanistan and between 2003 and 2008 deployed 1,165 troops to Iraq. In addition, it has contributed to a number of other international peacekeeping and military missions. A recent analysis notes that “Latvia has no requirement and therefore no capacity to independently deploy and sustain forces beyond its national boundaries, although the armed forces have taken part in a range of NATO and EU missions.”⁴⁷³

Today, despite a military that consists of only 6,250 full-time servicemembers,⁴⁷⁴ Latvia contributes to operations abroad. It deployed troops to NATO’s Resolute Support Mission until the mission’s completion⁴⁷⁵ and participates in Operation Inherent Resolve in Iraq, where the mandate for Latvian soldiers taking part runs until February 2022,⁴⁷⁶ and NATO’s VJTF⁴⁷⁷ as well as a number of EU flagged missions.

Latvia’s National Defence Concept 2020–2024 states that “the National Guard must reach at least 10,000-men mark by 2024.”⁴⁷⁸ Latvia “is investing \$56 million annually through 2022 on military infrastructure, with two-thirds of this amount being spent to upgrade Ādaži military base, headquarters of the Canadian-led EFP battlegroup.”⁴⁷⁹

In 2020, Latvia spent 2.27 percent of GDP on defense and 26.0 percent of its defense budget on equipment, exceeding both NATO benchmarks.⁴⁸⁰ In February 2019, Latvia purchased four UH-60M Black Hawk helicopters from the United States.⁴⁸¹

In 2018, Latvia signed a \$133 million agreement to purchase Spike precision-guided tactical missiles, the first of which were delivered in February 2020.⁴⁸² A new team trainer for the missiles was installed in October 2020.⁴⁸³ Latvia has also expressed interest in procuring a medium-range ground-based air-defense system (GBADS). Joint procurements include Carl Gustav M-4 anti-tank rifles with Estonia in 2020 and armored vehicles with Finland, which is slated to begin manufacturing in 2021.⁴⁸⁴

Lithuania. Lithuania is the largest of the three Baltic States, and its armed forces total

22,000 active-duty troops.⁴⁸⁵ It reintroduced conscription in 2015 and lowered the age for compulsory service in December 2019.⁴⁸⁶

Lithuania has shown a steadfast commitment to international peacekeeping and military operations. Between 2003 and 2011, it sent 930 troops to Iraq. Since 2002, around 3,000 Lithuanian troops served in Afghanistan. Lithuania continues to contribute to NATO’s KFOR and contributed to its Resolute Support Mission until the alliance’s withdrawal of forces.

In 2020, Lithuania spent 2.13 percent of GDP on defense and 26.2 percent of its defense budget on equipment.⁴⁸⁷ In April 2019, the U.S. and Lithuania signed a five-year “roadmap” defense agreement.⁴⁸⁸ According to the Pentagon, the agreement will help “to strengthen training, exercises, and exchanges” and help Lithuania “to defend against malicious cyber intrusions and attacks.” The two nations also pledged “to support regional integration and procurement of warfighting systems,” including “integrated air and missile defense systems and capabilities to enhance maritime domain awareness.”⁴⁸⁹ A new “Mobilisation and Host Nation Support law” took effect in January 2021.⁴⁹⁰

In November 2020, Lithuania signed a \$213 million deal to purchase four UH-60M Black Hawk helicopters, beginning in late 2024.⁴⁹¹ The U.S. is contributing approximately \$30 million to help in the acquisition.⁴⁹² In October 2020, Lithuania received a Norwegian-made NASAMS mid-range air defense system armed with U.S.-made missiles.⁴⁹³ Lithuania plans to spend an additional \$104 million through 2030 to purchase Javelin anti-tank weapons to supplement the 124 that it already has.⁴⁹⁴ Additional procurements include Boxer Infantry Fighting Vehicles and €145 million for 200 U.S. made Oshkosh Joint Light Tactical Vehicles.⁴⁹⁵

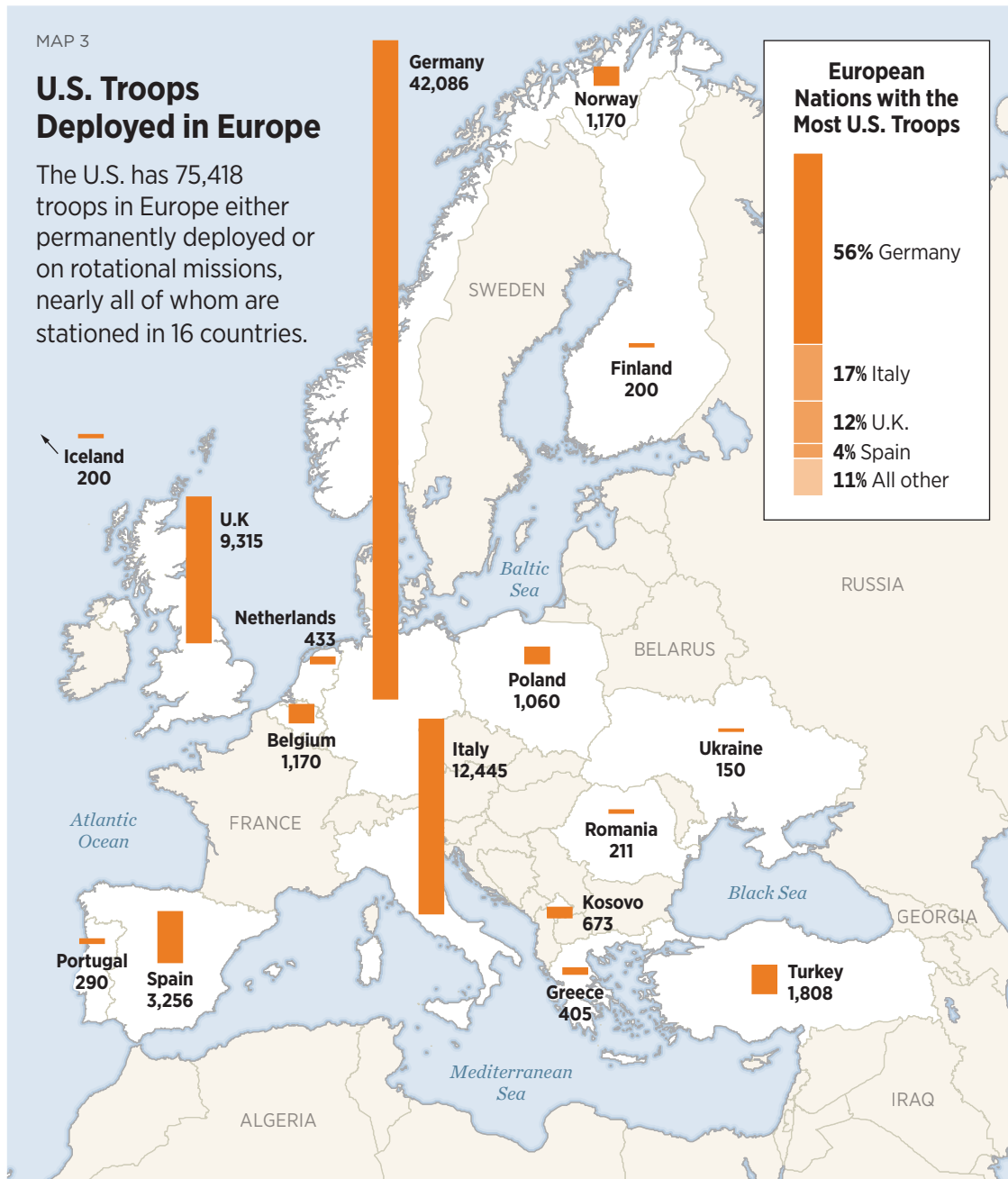
Current U.S. Military Presence in Europe

At its peak in 1953, because of the Soviet threat to Western Europe, the U.S. had approximately 450,000 troops in Europe operating across 1,200 sites. During the early 1990s, both in response to a perceived reduction in the threat from Russia and as part of the so-called

MAP 3

U.S. Troops Deployed in Europe

The U.S. has 75,418 troops in Europe either permanently deployed or on rotational missions, nearly all of whom are stationed in 16 countries.



NOTES:

- **Germany.** Rotational troops as part of Operation Atlantic Resolve are often deployed further forward to Bulgaria, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, and Slovakia.
- **Norway.** About 1,000 rotational troops were deployed from January to April 2021 for cold-weather training, on what is becoming a consistent winter deployment.
- **Kosovo.** Nearly all U.S. forces are part of NATO's Kosovo Force.
- **Romania.** Rotational forces have deployed from permanent bases in Italy.
- **Iceland.** Nearly all of these forces are temporarily deployed from permanent bases in the United Kingdom and taking part in Icelandic Air Policing.

SOURCE: Heritage Foundation research.

heritage.org

peace dividend following the end of the Cold War, U.S. troop numbers in Europe were slashed. Today, fewer than 66,000 active-duty forces are permanently stationed in Europe.⁴⁹⁶

EUCOM's stated mission is to conduct military operations, international military partnering, and interagency partnering to enhance transatlantic security and defend the United States as part of a forward defensive posture. EUCOM is supported by four service component commands (U.S. Naval Forces Europe [NAVEUR]; U.S. Army Europe and Africa [USAREUR-AF]; U.S. Air Forces in Europe [USAFE]; and U.S. Marine Forces Europe [MARFOREUR]) and one subordinate unified command (U.S. Special Operations Command Europe [SOCEUR]).

U.S. Naval Forces Europe. NAVEUR is responsible for providing overall command, operational control, and coordination for maritime assets in the EUCOM and Africa Command (AFRICOM) areas of responsibility. This includes more than 20 million square nautical miles of ocean and more than 67 percent of the Earth's coastline.

This command is currently provided by the U.S. 6th Fleet, based in Naples, and brings critical U.S. maritime combat capability to an important region of the world. Some of the more notable U.S. naval bases in Europe include the Naval Air Station in Sigonella, Italy; the Naval Support Activity Base in Souda Bay, Greece; and the Naval Station at Rota, Spain.

In 2018, the Norfolk, Virginia-based Harry S. Truman Carrier Strike Group (CSG) executed no-notice deployments to the Mediterranean over the summer and the Norwegian Sea above the Arctic Circle in October; the Arctic deployment was the first for a CSG in 30 years.⁴⁹⁷ In February 2020, General Wolters highlighted the importance of CSG deployments: "In the maritime domain, we see predictable Carrier Strike Group and Amphibious presence as key elements of an agile theater posture. The reactivation of U.S. Second Fleet provides necessary maritime command and control capability in the Atlantic, while reinforcing NATO's western flank."⁴⁹⁸

U.S. Army Europe and Africa. In November 2020, U.S. Army Europe and U.S. Army Africa were consolidated into U.S. Army Europe and Africa (USAREUR-AF), headquartered in Wiesbaden, Germany.⁴⁹⁹ According to USAREUR-AF, "The consolidation of these two Army service component commands under one four-star commander will play a vital role in supporting missions across two interconnected theaters of operation" and will "enhance efficiency by streamlining the headquarters' ability to execute functions and improving global and regional contingency response efforts."⁵⁰⁰

The former USAREUR was established in 1952. Then, as today, the U.S. Army formed the bulk of U.S. forces in Europe. USAREUR-AF includes "approximately 73,000 U.S. Army personnel assigned and deployed throughout Europe and Africa."⁵⁰¹ Permanently deployed forces include the 2nd Cavalry Regiment, based in Vilseck, Germany, and the 173rd Airborne Brigade in Italy, with both units supported by the 12th Combat Aviation Brigade out of Ansbach, Germany. In November 2018, the 41st Field Artillery Brigade returned to Europe, with headquarters in Grafenwoehr, Germany. In addition:

Operational and theater enablers such as the 21st Theater Sustainment Command, 10th Army Air and Missile Defense Command, 7th Army Training Command, 79th Theater Sustainment Command, 66th and 207th Military Intelligence Brigades, 2nd Theater Signal Brigade, U.S. Army NATO Brigade, Installation Management Command-Europe and Regional Health Command-Europe provide essential skills and services that support our entire force.⁵⁰²

Reactivated in September 2019, the 1st Battalion, 6th Field Artillery, 41st Field Artillery Brigade is currently the only U.S. rocket artillery brigade in Europe and represents the first time in 13 years that USAREUR has had the Multiple Launch Rocket System in its command.⁵⁰³ A second field artillery battalion

was reactivated in the fall of 2020.⁵⁰⁴ The 5th Battalion, 4th Air Defense Artillery Regiment, was activated in November 2018 and is now based in Ansbach.⁵⁰⁵ The regiment will be the first in the Army to be fully operational with the Maneuver Short Range Air Defense system having already received four of the systems by the end of April 2021 and with more on the way.⁵⁰⁶ The U.S. Army in recent years has reinstituted a number of snap deployments to Europe to hone readiness.⁵⁰⁷ Each year, USAREUR-AF takes part in more than 60 exercises with 80,000 multinational participants from 75 countries.⁵⁰⁸

U.S. Air Forces in Europe. USAFE provides a forward-based air capability that can support a wide range of contingency operations. It originated as the 8th Air Force in 1942 and flew strategic bombing missions over the European continent during World War II. USAFE describes itself as “direct[ing] air operations in a theater spanning three continents, covering more than 19 million square miles, containing 104 independent states, and possessing more than a quarter of the world’s population and more than a quarter of the world’s Gross Domestic Product.”⁵⁰⁹

Headquartered at Ramstein Air Base, USAFE has seven main operating bases along with 114 geographically separated locations. The main operating bases include the RAF bases at Lakenheath and Mildenhall in the U.K., Ramstein and Spangdahlem Air Bases in Germany, Lajes Field in the Azores, Incirlik Air Base in Turkey, and Aviano Air Base in Italy.⁵¹⁰ Terrorist attacks against these installations remain a threat. In March and April 2020, five Tajik nationals who had come to Germany seeking refugee status were arrested for plotting terrorist attacks against U.S. Air Force bases and personnel on behalf of ISIS.⁵¹¹

Strategic bomber deployments continue periodically. In March 2021, U.S. B-1 and B-2 bombers flying from the U.S. deployed out of Orland Air Base in Norway and Lajes Field in Portugal, respectively.⁵¹² According to the U.S. Air Force, “Strategic bomber deployments to Europe provide theater familiarization for

aircrew members and demonstrate U.S. commitment to allies and partners.”⁵¹³

U.S. Marine Forces Europe. MARFOREUR was established in 1980. It was originally a “designate” component command, meaning that it was only a shell during peacetime but could bolster its forces during wartime. Its initial staff was 40 personnel based in London. By 1989, it included more than 180 Marines in 45 separate locations in 19 countries throughout the European theater. Today, the command is based in Boeblingen, Germany, and approximately 300 of the more than 1,500 Marines based in Europe are assigned to MARFOREUR.⁵¹⁴ It was also dual-hatted as Marine Corps Forces, Africa (MARFORAF), under U.S. Africa Command in 2008.

MARFOREUR supports the Norway Air Landed Marine Air Ground Task Force, the Marine Corps’ only land-based prepositioned stock. The Corps has enough prepositioned stock in Norway “to equip a fighting force of 4,600 Marines, led by a colonel, with everything but aircraft and desktop computers,”⁵¹⁵ and the Norwegian government covers half of the costs of the prepositioned storage. The prepositioned stock’s proximity to the Arctic region is particularly important geostrategically. In October 2018, Marines used the prepositioned equipment in NATO’s Trident Juncture 18 exercise, the largest NATO exercise in 16 years, which included 50,000 troops from 31 nations.⁵¹⁶ The prepositioned stocks were to factor heavily into the cancelled Cold Response 2020 exercise.⁵¹⁷

Crucially, MARFOREUR provides the U.S. with rapid reaction capability to protect U.S. embassies in North Africa. The Special-Purpose Marine Air-Ground Task Force–Crisis Response–Africa (SPMAGTF–CR–AF) is “based in Moron, Spain, although it frequently operates from NATO bases throughout the Mediterranean, to include most often Sigonella, Sicily,”⁵¹⁸ and provides a response force of 850 Marines, six MV-22 Ospreys, and three KC-130s.⁵¹⁹ The SPMAGTF helped with embassy evacuations in Libya and South Sudan and conducts regular drills with embassies in the region and exercises with a host of African nations’ militaries.⁵²⁰

U.S. Special Operations Command Europe. SOCEUR is the only subordinate unified command under EUCOM. Its origins are in the Support Operations Command Europe, and it was based initially in Paris. This headquarters provided peacetime planning and operational control of special operations forces during unconventional warfare in EUCOM's area of responsibility.

SOCEUR has been headquartered in Panzer Kaserne near Stuttgart, Germany, since 1967. It also operates out of RAF Mildenhall. In June 2018, U.S. Special Operations Command General Tony Thomas stated that the U.S. plans "to move tactical United States special operations forces from the increasingly crowded and encroached Stuttgart installation of Panzer Kaserne to the more open training grounds of Baumholder" in a move that is expected to take a few years.⁵²¹

Due to the sensitive nature of special operations, publicly available information is scarce. However, it has been documented that SOCEUR elements participated in various capacity-building missions and civilian evacuation operations in Africa, took an active role in the Balkans in the mid-1990s and in combat operations in the Iraq and Afghanistan wars, and most recently supported AFRICOM's Operation Odyssey Dawn in Libya.

SOCEUR also plays an important role in joint training with European allies and since June 2014 has maintained an almost continuous presence in the Baltic States and Poland in order to train special operations forces in those countries. A new special operations base in Latvia that opened in December 2020, for example, "includes a vehicle servicing facility, ammunition storage and two helipads for U.S. CV-22 aircraft from the United Kingdom-based 352nd Special Operations Wing," all of which "are designed to allow special operations forces to move rapidly in and out of the area and conduct maintenance."⁵²²

According to General Tod Wolters, SOf "provide invaluable contributions in sensing the operational environment, enhancing our ability to deter through enhanced indications and warnings."⁵²³ The FY 2021 DOD EDI

budget request included over \$40 million in declared special operations funding for various programs including intelligence enhancements, staging and prepositioning, and exercises with allies.⁵²⁴

Key Infrastructure and Warfighting Capabilities

One of the major advantages of having U.S. forces in Europe is access to logistical infrastructure. For example, EUCOM supports the U.S. Transportation Command (TRANSCOM) with its array of air bases and access to ports throughout Europe. One of these bases, Mihail Kogalniceanu Air Base in Romania, is a major logistics and supply hub for U.S. equipment and personnel traveling to the Middle East region.⁵²⁵

Europe is a mature and advanced operating environment. Because of its decades-long presence in Europe, the U.S. benefits from tried and tested systems that involve moving large numbers of matériel and personnel into, within, and out of the continent. This offers an operating environment that is second to none in terms of logistical capability. There are more than 166,000 miles of rail line in Europe (not including Russia), an estimated 90 percent of roads in Europe are paved, and the U.S. enjoys access to a wide array of airfields and ports across the continent.

Conclusion

Overall, the European region remains a stable, mature, and friendly operating environment. Russia remains the preeminent military threat, both conventionally and unconventionally, but Chinese propaganda, influence operations, and investments in key sectors present a new threat that needs to be addressed. NATO and many European countries apart from those in the alliance have taken increased interest in the behavior and ambitions of both countries, although an agreed upon, collective way to address these challenges remains elusive.

America's closest and oldest allies are located in Europe, and the region is incredibly

important to the U.S. for economic, military, and political reasons. Perhaps most important, the U.S. has treaty obligations through NATO to defend the European members of that alliance. If the U.S. needs to act in the European region or nearby, there is a history of interoperability with allies and access to key logistical infrastructure that makes the operating environment in Europe more favorable than the environment in other regions in which U.S. forces might have to operate.

The past year saw continued U.S. reengagement with the continent, both militarily and politically, along with continued increases in European allies' defense budgets and capability investments. The U.S. has increased its investment in Europe, and its military position on the continent is stronger than it has been for some time.

The economic, political, and societal impacts of the COVID-19 pandemic are only

beginning to be felt and will undoubtedly have to be reckoned with for years to come, particularly with respect to Europe's relationship with China. NATO utilized a host of resources to assist with the response to COVID-19 while continuing to ensure that the pandemic did not enervate the alliance's collective defense.

NATO's renewed focus on collective defense has resulted in a focus on logistics, newly established commands that reflect a changed geopolitical reality, and a robust set of exercises. NATO's biggest challenges derive from capability and readiness gaps for many European nations, continuing improvements and exercises in the realm of logistics, a tempestuous Turkey, disparate threat perceptions within the alliance, and the need to establish the ability to mount a robust response to both linear and nonlinear forms of aggression.

Scoring the European Operating Environment

As noted at the beginning of this section, various considerations must be taken into account in assessing the regions within which the U.S. may have to conduct military operations to defend its vital national interests. Our assessment of the operating environment utilized a five-point scale, ranging from "very poor" to "excellent" conditions and covering four regional characteristics of greatest relevance to the conduct of military operations:

- 1. Very Poor.** Significant hurdles exist for military operations. Physical infrastructure is insufficient or nonexistent, and the region is politically unstable. The U.S. military is poorly placed or absent, and alliances are nonexistent or diffuse.
- 2. Unfavorable.** A challenging operating environment for military operations is marked by inadequate infrastructure, weak alliances, and recurring political
- 3. Moderate.** A neutral to moderately favorable operating environment is characterized by adequate infrastructure, a moderate alliance structure, and acceptable levels of regional political stability. The U.S. military is adequately placed.
- 4. Favorable.** A favorable operating environment includes good infrastructure, strong alliances, and a stable political environment. The U.S. military is well placed in the region for future operations.
- 5. Excellent.** An extremely favorable operating environment includes well-established and well-maintained infrastructure; strong, capable allies; and a stable political environment. The U.S. military is exceptionally well placed to defend U.S. interests.

The key regional characteristics consist of:

- a. **Alliances.** Alliances are important for interoperability and collective defense, as allies are more likely to lend support to U.S. military operations. Various indicators provide insight into the strength or health of an alliance. These include whether the U.S. trains regularly with countries in the region, has good interoperability with the forces of an ally, and shares intelligence with nations in the region.
- b. **Political Stability.** Political stability brings predictability for military planners when considering such things as transit, basing, and overflight rights for U.S. military operations. The overall degree of political stability indicates whether U.S. military actions would be hindered or enabled and considers such questions as whether transfers of power are generally peaceful and whether there have been any recent instances of political instability in the region.
- c. **U.S. Military Positioning.** Having military forces based or equipment and supplies staged in a region greatly enhances the ability of the United States to respond to crises and, presumably, achieve successes in critical “first battles” more quickly. Being routinely present in a region also helps the U.S. to maintain

familiarity with its characteristics and the various actors that might try to assist or thwart U.S. actions. With this in mind, we assessed whether or not the U.S. military was well positioned in the region. Again, indicators included bases, troop presence, prepositioned equipment, and recent examples of military operations (including training and humanitarian) launched from the region.

- d. **Infrastructure.** Modern, reliable, and suitable infrastructure is essential to military operations. Airfields, ports, rail lines, canals, and paved roads enable the U.S. to stage, launch operations from, and logistically sustain combat operations. We combined expert knowledge of regions with publicly available information on critical infrastructure to arrive at our overall assessment of this metric.

For Europe, scores this year remained steady, with no substantial changes in any individual categories or average scores:

- Alliances: **4—Favorable**
- Political Stability: **4—Favorable**
- U.S. Military Positioning: **4—Favorable**
- Infrastructure: **4—Favorable**

Leading to a regional score of: **Favorable**

Operating Environment: Europe

	VERY POOR	UNFAVORABLE	MODERATE	FAVORABLE	EXCELLENT
Alliances				✓	
Political Stability				✓	
U.S. Military Posture				✓	
Infrastructure				✓	
OVERALL				✓	

Endnotes

1. Peter Ong, "U.S. Navy Reports on Arctic and North Atlantic," *Naval News*, February 20, 2021, <https://www.navalnews.com/naval-news/2021/02/u-s-navy-reports-on-arctic-and-north-atlantic/> (accessed June 5, 2021).
2. Trisha Thomas, "NATO: Russia Uses Syrian War to Boost Mediterranean Presence," Associated Press, May 7, 2018, <https://apnews.com/article/391be5ea4450452caa7d84458806b9e9> (accessed June 5, 2021).
3. David A. Wemer, "US Joint Chiefs Chairman Makes the Case for Keeping US Troops in Europe," Atlantic Council, March 21, 2019, <https://www.atlanticcouncil.org/blogs/new-atlanticist/us-joint-chiefs-chairman-makes-the-case-for-keeping-us-troops-in-europe> (accessed June 5, 2021).
4. U.S. Army Europe and Africa, "Fact Sheet: U.S. Army Europe and Africa Support to Atlantic Resolve," as of February 16, 2021, <https://www.europeafrica.army.mil/Portals/19/documents/Fact%20Sheets/Atlantic-Resolve-Fact-Sheet-02162021.pdf> (accessed June 5, 2021).
5. Latvian Information Agency/Baltic News Service/TBT Staff, "Trump Proposes 25% Drop in Fund Designed to Deter Russia," *The Baltic Times*, February 12, 2020, https://www.baltictimes.com/trump_proposes_25_drop_in_fund_designed_to_deter_russia/ (accessed June 5, 2021).
6. U.S. European Command, "FY 2020 European Deterrence Initiative (EDI) Fact Sheet," <https://www.eucom.mil/document/39921/fy-2020-european-deterrence-initiative-fact-s> (accessed June 5, 2021).
7. General Tod D. Wolters, United States Air Force, Commander, United States European Command, statement before the Committee on Armed Services, U.S. Senate, April 13, 2021, p. 11, <https://www.armed-services.senate.gov/imo/media/doc/CLEARED%20USEUCOM%20SASC%20Congressional%20Posture%20Statement.pdf> (accessed June 5, 2021).
8. General Curtis M. Scaparrotti, Commander, United States European Command, statement before the Subcommittee on Military Construction, Veterans Affairs, and Related Agencies, Committee on Appropriations, U.S. Senate, May 2, 2017, unclassified "Resource Requirements—Addendum," p. [1], <https://www.appropriations.senate.gov/imo/media/doc/050217-Scaparrotti-Testimony.pdf> (accessed June 5, 2021).
9. Phil Stewart, "Military Deploys First Coronavirus Test Kits, Though Capacity Is Limited," *Task & Purpose*, March 6, 2020, <https://taskandpurpose.com/news/military-deploys-coronavirus-test-kits> (accessed June 5, 2021).
10. Aaron Mehta, "Special US Fund to Replace Russian Equipment in Europe Is Shifting Its Strategy," *Defense News*, March 18, 2020, <https://www.defensenews.com/global/europe/2020/03/18/special-us-fund-to-replace-russian-equipment-in-europe-is-shifting-its-strategy/> (accessed June 5, 2021).
11. U.S. Army Europe and Africa, "Press Release: Eighth Atlantic Resolve Armored Rotation Set to Begin Mission," July 9, 2021, <https://www.europeafrica.army.mil/ArticleViewPressRelease/Article/2688252/press-release-eighth-atlantic-resolve-armored-rotation-set-to-begin-mission/> (accessed July 19, 2021).
12. Caroline Houck, "Army Chief: The US Needs More Troops in Europe," *Defense One*, November 15, 2017, <https://www.defenseone.com/threats/2017/11/army-chief-us-needs-more-troops-europe/142580/> (accessed June 5, 2021).
13. This was announced early in 2016. See Reuters, "U.S. to Deploy Armored Brigade Combat Teams to Europe," March 30, 2016, <https://www.reuters.com/article/us-usa-military-europe-idUSKCN0WW23P> (accessed June 5, 2021). In early 2017, the Army initiated a program to rotate units from CONUS to Europe and back, emphasizing the heel-to-toe aspect, meaning that the replacing unit would arrive before departure of the current unit so as to achieve a constant presence in Europe. The program began in January 2017 with the 10th CAB, followed by the 1st CAB in November 2017 and the 4th CAB in June 2018. See Spc. Thomas Scaggs, "10th Combat Aviation Brigade Returns from Successful Rotation in Europe," U.S. Army, November 15, 2017, https://www.army.mil/article/196979/10th_combat_aviation_brigade_returns_from_successful_rotation_in_europe (accessed June 5, 2021), and Staff Sgt. Adrian Patoka, "Third Atlantic Resolve Aviation Brigade Arrives in Europe," U.S. Department of Defense, June 22, 2018, <https://www.defense.gov/News/Article/Article/1558059/third-atlantic-resolve-aviation-brigade-arrives-in-europe/> (accessed June 5, 2021).
14. U.S. Army Europe and Africa, "Fact Sheet: U.S. Army Europe and Africa Support to Atlantic Resolve," as of February 16, 2021.
15. U.S. Army Europe and Africa, "Press Release: Seventh Atlantic Resolve Aviation Rotation to Begin," February 16, 2021, <https://www.europeafrica.army.mil/ArticleViewPressRelease/Article/2503723/press-release-seventh-atlantic-resolve-aviation-rotation-to-begin/> (accessed June 5, 2021).
16. Robert Burns, "Austin: US Adds 500 Troops in Germany, Despite Trump Pledge," Associated Press, April 13, 2021, <https://apnews.com/article/joe-biden-europe-lloyd-austin-berlin-germany-201df3ddf8a2b17336c4df2cbf88efld> (accessed June 5, 2021).
17. Kyle Rempfer, "Air Force MQ-9 Reaper Drones Based in Poland Are Now Fully Operational," *Air Force Times*, March 5, 2019, <https://www.airforcetimes.com/news/your-air-force/2019/03/05/air-force-mq-9-reaper-drones-based-in-poland-are-now-fully-operational/> (accessed June 10, 2021).

18. John Vandiver, "US Air Force Deploys Reaper Drones to Estonia for First Time on Short-Term Mission," *Stars and Stripes*, June 15, 2020, <https://www.stripes.com/news/europe/us-air-force-deploys-reaper-drones-to-estonia-for-first-time-on-short-term-mission-1.633809> (accessed June 10, 2021).
19. Press release, "U.S. Air Force Establishes Enduring Presence in Romania," U.S. Air Forces in Europe and Air Forces Africa, January 4, 2021, <https://www.usafe.af.mil/News/Press-Releases/Article/2461113/us-air-force-establishes-enduring-presence-in-romania/> (accessed June 10, 2021).
20. Oriana Pawlyk, "With Fewer US Troops in Europe, MQ-9 Reaper Drones Are Filling the Gap," *Military.com*, February 26, 2021, <https://www.military.com/daily-news/2021/02/26/fewer-us-troops-europe-mq-9-reaper-drones-are-filling-gap.html> (accessed June 10, 2021).
21. Stephen Losey, "Air Force Bases MQ-9 Reapers in Romania," *Air Force Times*, January 5, 2021, <https://www.airforcetimes.com/news/your-air-force/2021/01/05/air-force-bases-mq-9-reapers-in-romania/#:~:text=The%20Air%20Force%20said%20Monday,Africa%20said%20in%20a%20release> (accessed June 10, 2021).
22. Brian W. Everstine, "US, Poland Finish Negotiations on Troop Increase, Drones," *Air Force Magazine*, August 3, 2020, <https://www.airforcemag.com/us-poland-end-negotiations-on-troop-increase-drones/> (accessed June 10, 2021).
23. BBC News, "Pompeo Signs Deal to Redeploy Troops from Germany to Poland," August 15, 2020, <https://www.bbc.com/news/world-europe-53792019> (accessed June 10, 2021).
24. Jędrzej Graf and Jakub Palowski, "Defence24 Reveals Details of the Enhanced Defence Cooperation Agreement [EXCLUSIVE]," *Defense24*, September 14, 2020, <https://www.defence24.com/defence24-reveals-details-of-the-enhanced-defence-cooperation-agreement-exclusive> (accessed June 10, 2021).
25. Ibid.
26. John Vandiver, "V Corps Takes up Position at New Poland Headquarters," *Stars and Stripes*, November 20, 2020, <https://www.stripes.com/news/europe/v-corps-takes-up-position-at-new-poland-headquarters-1.652807> (accessed June 10, 2021).
27. John Vandiver, "Army's V Corps, with a Long History in Europe, Is Back in Action," *Stars and Stripes*, October 16, 2020, <https://www.stripes.com/news/army-s-v-corps-with-a-long-history-in-europe-is-back-in-action-1.648804> (accessed June 10, 2021).
28. Thomas Nilsen, "U.S. Navy to Build Airport Infrastructure in North Norway to Meet Upped Russian Submarine Presence," *Eye on the Arctic*, April 16, 2021, <https://www.rcinet.ca/eye-on-the-arctic/2021/04/16/u-s-navy-to-build-airport-infrastructure-in-north-norway-to-meet-upped-russian-submarine-presence/> (accessed June 10, 2021).
29. Reuters, Terje Solsvik, and Nerijus Adomaitis, "Norway to Allow U.S. Military to Build on Its Soil in New Accord," Reuters, April 16, 2021, <https://www.reuters.com/world/europe/norway-may-allow-us-military-build-its-soil-revised-cooperation-deal-2021-04-16/> (accessed June 5, 2021).
30. Philip Athey, "Marine Corps Announces End to Year-Round Deployment to Norway," *Marine Corps Times*, August 13, 2020, <https://www.marinecorpstimes.com/news/your-marine-corps/2020/08/13/marine-corps-announces-end-to-year-round-deployment-to-norway/> (accessed June 10, 2021).
31. "1,000 US Marines Arrive in Norway for Cold-Weather Training," *Stars and Stripes*, January 8, 2021, <https://www.stripes.com/news/europe/1-000-us-marines-arrive-in-norway-for-cold-weather-training-1.657845> (accessed June 10, 2021).
32. John Vandiver, "700 Marines Arrive in Norway for Six-Month Mission," *Stars and Stripes*, September 27, 2019, <https://www.stripes.com/news/700-marines-arrive-in-norway-for-six-month-mission-1.600760> (accessed June 10, 2021).
33. Brian E. Everstine, "First B-1 Deployment to Norway Shows Importance of Arctic, Cold-Weather Ops," *Air Force Magazine*, March 5, 2021, <https://www.airforcemag.com/first-b-1-deployment-to-norway-shows-importance-of-arctic-cold-weather-ops/> (accessed June 10, 2021).
34. Ibid. and Thomas Nilsen, "U.S. B-1 Bomber Makes First Landing Inside Norway's Arctic Circle," *The Barents Observer*, March 9, 2021, <https://thebarentsobserver.com/en/security/2021/03/us-b-1-bomber-makes-first-landing-inside-norways-arctic-circle> (accessed June 10, 2021).
35. Bruno Waterfield, "Norway Reopens Submarine Base to Help US," *The Times*, October 12, 2020, <https://www.thetimes.co.uk/article/norway-reopens-submarine-base-to-help-us-hlmr3wv8s> (accessed June 10, 2021).
36. Ibid.
37. U.S. Army Europe and Africa, "Fact Sheet: U.S. Army Europe and Africa Support to Atlantic Resolve," as of July 6, 2021, https://www.europeafrica.army.mil/Portals/19/documents/Fact%20Sheets/AtlanticResolveFactSheet_07062021.pdf (accessed July 20, 2021).
38. "Foreign Warships on Bosphorus in 2021," *Bosphorus Naval News*, last updated July 12, 2021, <https://turkishnavy.net/foreign-warship-on-bosphorus/foreign-warship-on-bosphorus-in-2021/> (accessed July 20, 2021).

39. Idrees Ali, "With an Eye on Russia, U.S. Navy Re-establishing Its Second Fleet," Reuters, May 4, 2018, <https://www.reuters.com/article/us-usa-defense-navy-russia/with-an-eye-on-russia-u-s-navy-re-establishing-its-second-fleet-idUSKBN1I52CJ> (accessed June 10, 2021).
40. 13News Now Staff, "US Second Fleet Declares Full Operational Capability," WVEC, Norfolk, Virginia, updated January 1, 2020, <https://www.13newsnow.com/article/news/national/military-news/us-2nd-fleet-declares-full-operational-capability/291-4ddcb02-5f8d-46c6-8c2c-62ba665b017b> (accessed June 10, 2021).
41. U.S. 2nd Fleet, "U.S. 2nd Fleet to Lead BALTOPS 2019," *Military News*, April 2, 2019, https://www.militarynews.com/news/u-s-2nd-fleet-to-lead-baltops-2019/article_00db98bc-557a-11e9-a02b-c718d36bd746.html (accessed June 10, 2021).
42. Paul McLeary, "How the US Is Preparing to Hunt New Chinese, Russian Subs," *Breaking Defense*, September 17, 2020, <https://breakingdefense.com/2020/09/how-the-us-is-preparing-to-hunt-new-chinese-russian-subs/> (accessed June 10, 2021).
43. 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 10, 2021).
44. McLeary, "How the US Is Preparing to Hunt New Chinese, Russian Subs."
45. Ong, "U.S. Navy Reports on Arctic and North Atlantic."
46. Ibid.
47. U.S. 6th Fleet Public Affairs, "USS New Mexico Arrives in Tromsø, Norway," U.S. Naval Forces Europe–Africa / U.S. 6th Fleet, May 10, 2021, <https://www.c6f.navy.mil/Press-Room/News/Article/2600979/uss-new-mexico-arrives-in-troms-norway/> (accessed June 29, 2021).
48. Ong, "U.S. Navy Reports on Arctic and North Atlantic."
49. Joseph Trevithick, "Admiral Warns America's East Coast Is No Longer a 'Safe Haven' Thanks to Russian Subs," *The War Zone*, February 4, 2020, <https://www.thedrive.com/the-war-zone/32087/admiral-warns-americas-east-coast-is-no-longer-a-safe-haven-thanks-to-russian-subs> (accessed June 10, 2021).
50. U.S. Army Europe, "Army Prepositioned Stock–Europe," *STAND-TO! The Official Focus of the U.S. Army*, August 3, 2017, <https://www.army.mil/standto/2017-08-03> (accessed June 10, 2019).
51. U.S. Department of Defense, Office of the Secretary of Defense (Comptroller), *Department of Defense Budget Fiscal Year (FY) 2019: European Deterrence Initiative*, February 2018, pp. 12, 13, and 23, http://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2019/fy2019_EDI_JBook.pdf (accessed June 10, 2021).
52. Christopher Woody, "The US Marine Corps' Big Plans to Redesign Its Force Means Changes to What It Stores in Secret Caves in Norway," *Business Insider*, August 18, 2020, <https://www.businessinsider.com/marine-corps-force-redesign-means-taking-tanks-from-norway-caves-2020-8> (accessed June 30, 2021).
53. U.S. Department of Defense, Office of the Undersecretary of Defense (Comptroller), *Department of Defense Budget Fiscal Year (FY) 2021: European Deterrence Initiative*, February 2020, p. 12, https://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2021/fy2021_EDI_JBook.pdf (accessed June 17, 2021).
54. Sydney J. Freedberg Jr., "Army Adding New Arms Stockpile in Europe: Gen. Perna," *Breaking Defense*, February 4, 2020, <https://breakingdefense.com/2020/02/army-adding-new-arms-stockpile-in-europe-gen-perna/> (accessed June 30, 2021).
55. Wolters, statement before Senate Armed Services Committee, April 13, 2021, p. 15.
56. George C. Marshall European Center for Security Studies, "Marshall Center Voices: General Christopher Cavoli, Commander of U.S. Army Europe and Africa," May 5, 2021, <https://www.youtube.com/watch?v=pZJiGEE7FSQ> (accessed June 30, 2021).
57. C. Todd Lopez, "Defender Europe 21 Exercises Multinational Interoperability, Readiness, Transparency," U.S. Department of Defense, May 3, 2021, <https://www.defense.gov/Explore/News/Article/Article/2593494/defender-europe-21-exercises-multinational-interoperability-readiness-transpare/> (accessed June 30, 2021).
58. North Atlantic Treaty Organization, *The Secretary General's Annual Report: 2020*, p. 34, https://www.nato.int/nato_static_fl2014/assets/pdf/2021/3/pdf/sgar20-en.pdf (accessed June 4, 2021).
59. Transcript, "Press Conference X [sic] by NATO Secretary General Jens Stoltenberg Following the Meeting of NATO Ministers of Foreign Affairs," North Atlantic Treaty Organization, last updated April 3, 2020, https://www.nato.int/cps/en/natohq/opinions_174925.htm?selectedLocale=en (accessed June 30, 2021).
60. News release, "COVID-19 Emergency Response Mission in Support to Romania," North Atlantic Treaty Organization, NATO Support and Procurement Agency, March 26, 2020, <https://www.nspa.nato.int/news/2020/emergency-response-mission-romania> (accessed June 30, 2021).

61. North Atlantic Treaty Organization, *The Secretary General's Annual Report: 2020*, p. 35.
62. Ibid., p. 36.
63. Ibid., p. 37.
64. Kent Harris, "US Military Could Vaccinate Thousands of Europeans with Base Ties," *Stars and Stripes*, April 27, 2021, <https://www.stripes.com/news/europe/us-military-could-vaccinate-thousands-of-europeans-with-base-ties-1.671308> (accessed June 30, 2021).
65. North Atlantic Treaty Organization, *The Secretary General's Annual Report: 2020*, p. 37.
66. Andrew A. Michta, "Without the US, European Defense Will Fall to Pieces," *The American Interest*, October 23, 2019, <https://www.the-american-interest.com/2019/10/23/without-the-us-european-defense-will-fall-to-pieces/> (accessed June 30, 2021).
67. Hope Hodge Seck, "Military Update: Coronavirus Cancellations and Closures," *Military.com*, March 17, 2020, <https://www.military.com/daily-news/2020/03/17/military-update-coronavirus-cancellations-and-closures.html> (accessed June 30, 2021).
68. Christopher Woody, "The US and NATO Started 2020 with Big Plans to Practice a Vital Military Skill—Then the Coronavirus Hit," *Business Insider*, June 15, 2020, <https://www.businessinsider.com/coronavirus-may-undermine-nato-eu-military-mobility-plans-in-europe-2020-6> (accessed June 30, 2021).
69. Ibid.
70. John Vandiver, "The Navy's Big Baltic Exercise Is Underway, but COVID-19 Means No Marines Storming the Beach," *Stars and Stripes*, June 9, 2020, <https://www.stripes.com/news/europe/the-navy-s-big-baltic-exercise-is-underway-but-covid-19-means-no-marines-storming-the-beach-1.632971> (accessed June 17, 2021).
71. Wolters, statement before Senate Armed Services Committee, April 13, 2021, p. 15.
72. Joseph Trevithick, "Air Force Shows Off Squadron Logo Highlighting Stockpile of Nuclear Bombs in Belgium," *The War Zone*, March 31, 2021, <https://www.thedrive.com/the-war-zone/40008/air-force-shows-off-squadron-logo-highlighting-stockpile-of-nuclear-bombs-in-belgium> (accessed June 30, 2021).
73. John Vandiver, "US Reviewing Plans to Move Nuclear Weapons from Incirlik, Report Says," *Stars and Stripes*, October 15, 2019, <https://www.stripes.com/news/europe/us-reviewing-plans-to-move-nuclear-weapons-from-incirlik-report-says-1.603116> (accessed June 17, 2021).
74. Abhijnan Rej, "US Sanctions Turkey over Russian Air Defense System, Raising Questions and Concerns," *The Diplomat*, December 16, 2020, <https://thediplomat.com/2020/12/us-sanctions-turkey-over-russian-air-defense-system-raising-questions-and-concerns/> (accessed June 30, 2021).
75. Trevithick, "Air Force Shows Off Squadron Logo Highlighting Stockpile of Nuclear Bombs in Belgium."
76. U.S. Department of Energy, National Nuclear Security Administration, "B61-12 Life Extension Program (LEP) Fact Sheet," June 1, 2020, <https://www.energy.gov/nnsa/articles/b61-12-life-extension-program-lep-fact-sheet> (accessed June 30, 2021).
77. Oriana Pawlyk, "Air Force Advances Testing of New Nuclear Gravity Bomb: General," *Military.com*, May 1, 2018, <https://www.military.com/dodbuzz/2018/05/01/air-force-advances-testing-new-nuclear-gravity-bomb-general.html> (accessed June 30, 2021).
78. U.S. Department of Energy, National Nuclear Security Administration, "B61-12 Life Extension Program (LEP) Fact Sheet."
79. Greg Waldron, "F-35A Drops Inert Nuclear Bomb for First Time," *Flight Global*, November 26, 2020, <https://www.flightglobal.com/defence/f-35a-drops-inert-nuclear-bomb-for-first-time/141330.article> (accessed June 30, 2021).
80. Press release, "London Declaration Issued by the Heads of State and Government Participating in the Meeting of the North Atlantic Council in London 3–4 December 2019," North Atlantic Treaty Organization, December 4, 2019, https://www.nato.int/cps/en/natohq/official_texts_171584.htm (accessed June 30, 2021).
81. Ong, "U.S. Navy Reports on Arctic and North Atlantic."
82. Ibid.
83. North Atlantic Treaty Organization, "Resolute Support Mission in Afghanistan," last updated April 15, 2021, https://www.nato.int/cps/en/natohq/topics_113694.htm (accessed June 30, 2021).
84. North Atlantic Treaty Organization, "Operations and Missions: Past and Present," last updated April 22, 2021, https://www.nato.int/cps/en/natohq/topics_52060.htm (accessed June 30, 2021).
85. North Atlantic Treaty Organization, "Resolute Support Mission in Afghanistan."
86. North Atlantic Treaty Organization, "Operations and Missions: Past and Present."
87. Ibid.

88. Ibid.
89. North Atlantic Treaty Organization, "Relations with Iraq," last updated June 1, 2021, https://www.nato.int/cps/en/natohq/topics_88247.htm (accessed June 30, 2021).
90. France 24, "NATO to Expand Iraq Mission to Around 4,000 Personnel," February 18, 2021, <https://www.france24.com/en/europe/20210218-nato-to-expand-iraq-mission-to-around-4-000-personnel> (accessed June 30, 2021).
91. North Atlantic Treaty Organization, "Readiness Action Plan," last updated March 23, 2020, http://www.nato.int/cps/en/natohq/topics_119353.htm (accessed June 30, 2021).
92. Radio Free Europe/Radio Liberty, "NATO Agrees to 'Four 30s' Plan to Counter Russia," last updated June 7, 2018, <https://www.rferl.org/a/nato-ministers-expected-to-okay-four-thirties-initiative-stoltenberg/29275979.html> (accessed June 30, 2021).
93. North Atlantic Treaty Organization, *The Secretary General's Annual Report: 2019*, p. 16, https://www.nato.int/nato_static_fl2014/assets/pdf/2020/3/pdf_publications/sgar19-en.pdf (accessed June 4, 2021).
94. North Atlantic Treaty Organization, "Deterrence and Defence," last updated June 25, 2021, https://www.nato.int/cps/en/natohq/topics_133127.htm (accessed June 30, 2021).
95. North Atlantic Treaty Organization, Supreme Headquarters Allied Powers Europe, "Space Centre," <https://shape.nato.int/about/aco-capabilities2/nato-space-centre> (accessed July 6, 2021). See also John Vandiver, "New Space Center at Ramstein Is Part of NATO's Push to Protect Military Infrastructure," *Stars and Stripes*, October 22, 2020, <https://www.stripes.com/news/new-space-center-at-ramstein-is-part-of-nato-s-push-to-protect-military-infrastructure-1.649529> (accessed June 17, 2021).
96. Fact sheet, "NATO's Enhanced Forward Presence," North Atlantic Treaty Organization, March 2021, https://www.nato.int/nato_static_fl2014/assets/pdf/2021/3/pdf/2103-factsheet_efp_en.pdf (accessed June 30, 2021).
97. Ibid.
98. Ibid.
99. Ibid.
100. Ibid.
101. Mariusz Błaszczak, "Poland's Defense Minister: Making the Constant Effort to Strengthen Defense," *Defense News*, December 9, 2018, <https://www.defensenews.com/outlook/2018/12/10/polands-defense-minister-making-the-constant-effort-to-strengthen-defense/> (accessed June 30, 2021), and news release, "Landcom Soldiers in Elblag," North Atlantic Treaty Organization, Multinational Division North East, February 22, 2018, <https://mndne.wp.mil.pl/en/articlesnews-u/2018-02-226-landcom-soldiers-in-elblag/> (accessed June 30, 2021).
102. Baltic News Service, "Baltic Countries Sign Agreement on Fast Movement of NATO Forces," Latvian Information Agency, February 15, 2017, http://www.leta.lv/eng/defence_matters_eng/defence_matters_eng/news/CEB6CED4-EA2D-404C-8814-A8765D6BA915/ (accessed June 30, 2021).
103. Press release, "Saeima Approves the National Defence Concept," Ministry of Defence of the Republic of Latvia, September 28, 2020, <https://www.mod.gov.lv/en/news/saeima-approves-national-defence-concept#:~:text=National%20Guard%20are%20indispensable%20to,long%2Dterm%20protection%20of%20Latvia> (accessed June 30, 2021).
104. North Atlantic Treaty Organization, Allied Joint Force Command, "NATO Force Integration Unit (NFIU) Fact Sheet," <https://jfcbs.nato.int/page5725819/nato-force-integration-units/nato-force-integration-units-fact-sheet> (accessed June 30, 2021).
105. Press release, "Warsaw Summit Communiqué Issued by the Heads of State and Government Participating in the Meeting of the North Atlantic Council in Warsaw 8–9 July 2016," North Atlantic Treaty Organization, July 9, 2016, https://www.nato.int/cps/en/natohq/official_texts_133169.htm (accessed June 30, 2021).
106. Boris Toucas, "NATO and Russia in the Black Sea: A New Confrontation?" Center for Strategic and International Studies *Commentary*, March 6, 2017, <https://www.csis.org/analysis/nato-and-russia-black-sea-new-confrontation> (accessed June 4, 2021).
107. North Atlantic Treaty Organization, North Atlantic Council, Multinational Division Southeast, "About Us," <https://mndse.ro/about-us/> (accessed June 30, 2021). See also fact sheet, "Multinational Division Southeast (MND-SE)," United States Army NATO, May 9, 2018, <https://www.usanato.army.mil/About-Us/Articles/Article/1515759/multinational-division-southeast-mnd-se/> (accessed June 30, 2021).
108. North Atlantic Treaty Organization, *The Secretary General's Annual Report: 2020*, p. 16.
109. Capt. Brian Anderson, "Michigan Units Dash Hopes at Saber Guardian 19," U.S. Army, June 20, 2019, https://www.army.mil/article/223457/michigan_units_dash_hopes_at_saber_guardian_19 (accessed June 30, 2021).
110. Fact sheet, "Key NATO and Allied Exercises in 2021," North Atlantic Treaty Organization, March 2021, https://www.nato.int/nato_static_fl2014/assets/pdf/2021/3/pdf/2103-factsheet_exercises.pdf (accessed June 30, 2021).

111. U.S. Army Europe and Africa, “Press Release—DEFENDER-Europe 21 Activities Begin This Month, Include Two Dozen Nations,” March 15, 2021, <https://www.europeafrica.army.mil/ArticleViewPressRelease/Article/2537359/press-release-defender-europe-21-activities-begin-this-month-include-two-dozen/> (accessed June 30, 2021).
112. Ibid.
113. News release, “U.S. F-16 Begin NATO Air Policing Mission with Bulgarian Air Force,” North Atlantic Treaty Organization, September 28, 2020, https://ac.nato.int/archive/2020/US_eAP_BGR (accessed July 1, 2021).
114. News release, “NATO Intercepts Hundreds of Russian Military Jets in 2020,” North Atlantic Treaty Organization, December 28, 2020, https://www.nato.int/cps/en/natohq/news_180551.htm?selectedLocale=en (accessed July 1, 2021).
115. News release, “NSPA Delivers the Fourth Aircraft of the Multinational MRTT Fleet,” North Atlantic Treaty Organization, April 1, 2021, <https://www.nspa.nato.int/news/2021/nspa-delivers-the-fourth-aircraft-of-the-multinational-mrtt-fleet--2> (accessed July 1, 2021).
116. Gareth Jennings, “Czech Republic Joins EU/NATO MMF Tanker Group,” *Jane’s Defense Weekly*, October 24, 2019, <https://www.janes.com/defence-news/news-detail/czech-republic-joins-eunato-mmf-tanker-group> (accessed July 1, 2021).
117. Ciaran McGrath, “It’s a Farce! £10.5Billion Fleet Cannot Refuel RAF Aircraft Mid-Air—So We Rely on the US,” *Express*, July 30, 2018, <https://www.express.co.uk/news/uk/995845/hitch-raf-planes-voyagers-us-planes-air-to-air-refuelling-mid-air-refuelling> (accessed July 1, 2021).
118. Sebastian Sprenger, “NATO to Upgrade Its AWACS Surveillance Aircraft for \$1 Billion,” *Defense News*, November 20, 2019, <https://www.defensenews.com/global/europe/2019/11/20/nato-to-upgrade-its-awacs-surveillance-aircraft-for-1-billion/> (accessed July 1, 2021).
119. Jim Garamone, “NATO Approves Norfolk Joint Force Command, Defense Readiness Initiative,” U.S. Army, June 8, 2018, https://www.army.mil/article/206683/nato_approves_norfolk_joint_force_command_defense_readiness_initiative (accessed July 1, 2021), and news release, “NATO Defence Ministers Take Decisions to Strengthen the Alliance,” North Atlantic Treaty Organization, February 15, 2018, https://www.nato.int/cps/ua/natohq/news_152125.htm (accessed July 1, 2021).
120. Reuters, “Germany Chooses Ulm for New Proposed NATO Logistics Command,” March 20, 2018, <https://www.reuters.com/article/us-nato-germany/germany-chooses-ulm-for-new-proposed-nato-logistics-command-idUSKBNIGWIQM> (accessed July 1, 2021).
121. Christopher Woody, “A Convoy of US Army Howitzers Got Stopped by German Police, and It Points to a Major Problem NATO Has in Europe,” *Business Insider*, January 12, 2018, <http://www.businessinsider.com/us-army-howitzers-stopped-in-germany-nato-logistics-problems-2018-1> (accessed July 1, 2021).
122. Octavian Manea, “A Tour of Horizon Interview with Lieutenant General Ben Hodges on NATO Adaption and the Russian Way of War,” *Small Wars Journal*, August 7, 2018, <https://smallwarsjournal.com/jrnl/art/small-wars-journal-interview-lieutenant-general-ben-hodges-nato-adaptation-and-russian-way> (accessed July 1, 2021).
123. Maciej Szopa, “Military Mobility—A Key in Defending the NATO Eastern Flank,” *Defence24.com*, March 31, 2020, <https://www.defence24.com/military-mobility-a-key-in-defending-the-nato-eastern-flank> (accessed July 1, 2021).
124. Press release, “Action Plan on Military Mobility: EU Takes Steps Towards a Defence Union,” European Commission, March 28, 2018, https://ec.europa.eu/commission/presscorner/detail/en/IP_18_2521 (accessed June 5, 2021).
125. Ben Hodges, Tony Lawrence, and Ray Wojcik, “Until Something Moves: Reinforcing the Baltic Region in Crisis and War,” International Centre for Defense and Security, April 2020, p. 5, https://icds.ee/wp-content/uploads/2020/03/ICDS_Report_Until_Something_Moves_Hodges_Lawrence_Wojcik_April_2020_cor.pdf (accessed July 1, 2021).
126. North Atlantic Treaty Organization, *The Secretary General’s Annual Report: 2020*, p. 23. Article 5 of the North Atlantic Treaty states that an attack on one or more NATO member states will be considered an attack on all NATO member states. The North Atlantic Treaty, Article 5, April 4, 1949, last updated April 10, 2019, http://www.nato.int/cps/en/SID-857936BB-66246E10/natolive/official_texts_17120.htm (accessed July 2, 2021).
127. Press release, “Warsaw Summit Communiqué,” and Robin Emmott, “NATO Cyber Command to Be Fully Operational in 2023,” Reuters, October 16, 2018, <https://www.reuters.com/article/us-nato-cyber/nato-cyber-command-to-be-fully-operational-in-2023-idUSKCNIMQI29> (accessed June 5, 2021).
128. North Atlantic Treaty Organization, “Cyber Defence,” last updated April 12, p. 21, https://www.nato.int/cps/en/natohq/topics_78170.htm (accessed July 1, 2021).
129. North Atlantic Treaty Organization, *The Secretary General’s Annual Report: 2020*, p. 23.
130. Julian E. Barnes, “NATO Invests in More Bandwidth for New Data-Hungry Drones,” *The Wall Street Journal*, March 27, 2017, <https://www.wsj.com/articles/nato-invests-in-more-bandwidth-for-new-data-hungry-drones-1490601588> (accessed July 1, 2021).

131. Voice of America, "NATO to Receive First Northrop Surveillance Drone, Years Late," March 18, 2019, <https://www.voanews.com/a/nato-to-receive-first-northrop-surveillance-drone-years-late/4837218.html> (accessed July 1, 2021).
132. North Atlantic Treaty Organization, "NATO's Joint Air Power Strategy," June 26, 2018, p. 3, https://www.nato.int/nato_static_fl2014/assets/pdf/pdf_2018_06/20180626_20180626-joint-air-power-strategy.pdf (accessed July 1, 2021).
133. North Atlantic Treaty Organization, *The Secretary General's Annual Report: 2019*, p. 27.
134. North Atlantic Treaty Organization, *The Secretary General's Annual Report: 2020*, p. 24.
135. Dan Sabbagh, "Using Huawei in UK 5G Networks Would Be 'Madness,' US Says," *The Guardian*, January 13, 2020, <https://www.theguardian.com/technology/2020/jan/13/using-huawei-in-uk-5g-networks-would-be-madness-us-says> (accessed July 1, 2021).
136. Press release, "London Declaration Issued by the Heads of State and Government Participating in the Meeting of the North Atlantic Council in London 3–4 December 2019."
137. Dorian Archus, "NATO Has Completed AEGIS Upgrade at Romania," *Naval Post*, August 11, 2019, <https://navalpost.com/nato-has-completed-aegis-upgrade-at-romania/> (accessed July 1, 2021).
138. North Atlantic Treaty Organization, "NATO Ballistic Missile Defence Architecture as of 2019," https://www.nato.int/nato_static_fl2014/assets/pictures/2016_07_160711a-infographics-bmd/20170907_170907-bmd03.jpg (accessed June 2, 2019), and Joseph Trevithick, "The U.S. Army Wants to Expand a Secretive Missile Defense Site in Turkey," *The War Zone*, May 25, 2017, <http://www.thedrive.com/the-war-zone/10638/the-u-s-army-wants-to-expand-a-secretive-missile-defense-site-in-turkey> (accessed June 30, 2021).
139. Fact Sheet, "NATO Ballistic Missile Defence," North Atlantic Treaty Organization, July 2016, http://www.nato.int/nato_static_fl2014/assets/pdf/pdf_2016_07/20160630_1607-factsheet-bmd-en.pdf (accessed June 5, 2021).
140. John Vandiver, "Rota to Gain Two US Destroyers by Middle of the Decade, EUCOM Chief Says," *Stars and Stripes*, April 15, 2021, <https://www.stripes.com/news/europe/rota-to-gain-two-us-destroyers-by-middle-of-the-decade-eucom-chief-says-1.669830> (accessed June 17, 2021).
141. "US Navy Commissions NSF Redzikowo in Poland," *Naval Technology*, September 4, 2020, <https://www.naval-technology.com/news/us-navy-commissions-nsf-redzikowo-in-poland/> (accessed July 2, 2021).
142. Fact Sheet, "NATO Ballistic Missile Defence."
143. Ethan Anderson, "Ballistic Missile Defence and the Type 45 Destroyer," *UK Defence Journal*, March 19, 2021, <https://ukdefencejournal.org.uk/ballistic-missile-defence-and-the-type-45-destroyer/> (accessed July 2, 2021).
144. "Allied Forces Prepare for the Start of Exercise Formidable Shield 2021," *Naval News*, May 4, 2021, <https://www.navalnews.com/naval-news/2021/05/allied-forces-prepare-for-the-start-of-exercise-formidable-shield-2021/> (accessed July 2, 2021).
145. *Ibid.*
146. News release, "Allied Forces Prepare for the Start of Exercise At-Sea Demo/Formidable Shield 2021," U.S. Sixth Fleet Public Affairs, May 3, 2021, <https://www.navy.mil/Press-Office/News-Stories/Article/2592845/allied-forces-prepare-for-the-start-of-exercise-at-sea-demoformidable-shield-20/> (accessed July 2, 2021).
147. Atlantic Council, "Russia Threatens Norway to Stay out of NATO Missile Defense," March 21, 2017, <https://www.atlanticcouncil.org/blogs/natosource/russia-threatens-norway-to-stay-out-of-nato-missile-defense/> (accessed July 2, 2021).
148. Ronald O'Rourke, "Navy Aegis Ballistic Missile Defense (BMD) Program: Background and Issues for Congress," Congressional Research Service *Report for Members and Committees of Congress* No. RL33745, updated February 25, 2021, p. 2, <https://fas.org/sgp/crs/weapons/RL33745.pdf> (accessed June 5, 2021).
149. "Norwegian Government Scraps the Wrecked Frigate Helge Ingstad," *The Maritime Executive*, January 21, 2021, <https://www.maritime-executive.com/article/norwegian-government-scraps-the-wrecked-frigate-helge-ingstad> (accessed July 2, 2021).
150. Danish Government (Liberal Party, Liberal Alliance, and Conservatives); Social Democrats; Danish People's Party; and Social-Liberal Party, "Defence Agreement 2018–2013," <https://fmn.dk/globalassets/fmn/dokumenter/forlig/-danish-defence-agreement-2018-2023-pdf-a-2018.pdf> (accessed July 20, 2021).
151. "Denmark Progresses in NATO Ballistic Missile Defense Role," *Defense News*, April 22, 2016, <http://www.defensenews.com/story/defense/air-space/strike/2016/04/22/denmark-progresses-nato-ballistic-missile-defense-role/83391868/> (accessed July 2, 2021).
152. Xavier Vavasseur, "Germany and the Netherlands Joining Forces for F-124 / LCF Frigate Replacement," *Naval News*, December 18, 2020, <https://www.navalnews.com/naval-news/2020/12/germany-and-the-netherlands-joining-forces-for-f-124-lcf-frigate-replacement/> (accessed June 5, 2021).
153. "HNLMs De Zeven Provinciën Successfully Fires Two RIM-162 ESSM," *Navy Recognition*, May 21, 2021, <https://www.navyrecognition.com/index.php/naval-news/naval-news-archive/2021/may/10177-hnlms-de-zeven-provincien-successfully-fires-two-rim-162-essm.html> (accessed July 2, 2021).

154. Vavasseur, "Germany and the Netherlands Joining Forces for F-124 / LCF Frigate Replacement."
155. Xavier Vavasseur, "Video: Admiral De Beurme on Belgian Navy MCM and Frigate Programs," *Naval News*, April 5, 2021, <https://www.navalnews.com/naval-news/2021/04/video-admiral-de-beurme-on-belgian-navy-mcm-and-frigate-programs/> (accessed June 5, 2021).
156. "Thales to Develop Air Warfare Mission Suite for New Dutch, Belgian Frigates," *Naval Today*, February 29, 2019, <https://navaltoday.com/2019/02/28/thales-to-develop-air-warfare-mission-suite-for-new-dutch-belgian-frigates/> (accessed June 5, 2021).
157. Lockheed Martin, "Aegis: The Shield of the Fleet: Deployed Aegis Global; Fleet," <https://www.lockheedmartin.com/en-us/products/aegis-combat-system.html> (accessed July 2, 2021), and O'Rourke, "Navy Aegis Ballistic Missile Defense (BMD) Program: Background and Issues for Congress," p. 2.
158. "Lockheed Martin to Equip Spanish F-110 Frigates with New Radar System," *Naval Technology*, December 6, 2019, <https://www.naval-technology.com/news/lockheed-martin-spain-f-110/> (accessed July 10, 2021).
159. "PPA Class Multi-Purpose Offshore Patrol Vessels," *Naval Technology*, <https://www.naval-technology.com/projects/ppa-class-multi-purpose-offshore-patrol-vessels/> (accessed July 2, 2021).
160. "PPA to Bring BMD Capability to Italian Navy in 2024," *Navy Recognition*, March 5, 2018, <https://www.navyrecognition.com/index.php/naval-news/naval-news-archive/2018/march-2018-navy-naval-defense-news/6008-ppa-to-bring-bmd-capability-to-italian-navy-in-2024.html> (accessed July 2, 2021).
161. The North Atlantic Treaty, Article 3.
162. North Atlantic Treaty Organization, The Secretary General's Annual Report: 2020, p. 50.
163. Ibid.
164. Ibid., p. 48.
165. Ibid., p. 50.
166. Associated Press, "Germany's Merkel: 2% of GDP on Defense by 2031 'Realistic,'" November 7, 2019, <https://apnews.com/article/58e8073f384847a9a7627f0621215c52> (accessed July 2, 2021).
167. Leah Carter, "Germany Reports Record €53 Billion in NATO Defense Spending," Deutsche Welle, February 7, 2021, <https://www.dw.com/en/germany-reports-record-53-billion-in-nato-defense-spending/a-56491017?maca=en-Twitter-sharing> (accessed June 5, 2021).
168. "Germany's Low Defence Spending Weakens NATO," *Financial Times*, April 21, 2019, <https://www.ft.com/content/303ec9e8-5c3d-11e9-9dde-7aedca0a081a> (accessed July 2, 2021).
169. Fact sheet, "NATO's Enhanced Forward Presence."
170. Reuters, "Germany Vows to Keep Troops in Lithuania, Invest More in Barracks," February 4, 2019, <https://www.reuters.com/article/us-lithuania-nato/germany-vows-to-keep-troops-in-lithuania-invest-more-in-barracks-idUSKCN1PT1QN> (accessed June 5, 2021).
171. News release, "German Air Force Reinforces Patrolling of the Baltic Airspace," Republic of Lithuania, Ministry of National Defence, July 20, 2020, <https://www.defense-aerospace.com/articles-view/release/3/212571/german-air-force-reinforces-patrolling-of-the-baltic-airspace.html> (accessed July 20, 2021).
172. NATO Allied Air Command Public Affairs Office, "Italy Starts First-Time F-35 Deployment," May 3, 2021, <https://www.lockheedmartin.com/f35/news-and-features/italy-starts-first-time-f35-deployment.html> (accessed July 2, 2021).
173. North Atlantic Treaty Organization, Kosovo Force (KFOR), "Key Facts and Figures," February 2021, https://www.nato.int/nato_static_f12014/assets/pdf/2021/2/pdf/2021-02-KFOR-Placemat.pdf (accessed July 2, 2021).
174. North Atlantic Treaty Organization, Resolute Support Mission, "Resolute Support Mission (RSM): Key Facts and Figures," February 2021, https://www.nato.int/nato_static_f12014/assets/pdf/2021/2/pdf/2021-02-RSM-Placemat.pdf (accessed July 2, 2021).
175. Update, "Bundestag Decides to Extend the Deployments [of] UNMISS and Sea Guardian," Federal Republic of Germany, Federal Ministry of Defence, March 4, 2021, <https://www.bmvg.de/de/aktuelles/bundestag-beschliesst-verlaengerung-unmiss-sea-guardian-5037506> (accessed July 2, 2021).
176. Federal Republic of Germany, Federal Foreign Office, "UN Peace Missions and Germany's Engagement," February 5, 2020, <https://www.auswaertiges-amt.de/en/aussenpolitik/internationale-organisationen/vereintenationen/germanys-engagement-un-peace-missions/229116> (accessed July 2, 2021).
177. Press release, "Foreign Minister Maas on the German Bundestag's Extension of the Mandate to Counter IS," Federal Republic of Germany, Federal Foreign Office, October 29, 2020, <https://www.auswaertiges-amt.de/en/newsroom/news/-/2410976> (accessed July 2, 2021).

178. Associated Press, “German Military Resumes Training Troops in Northern Iraq,” January 26, 2020, <https://apnews.com/article/269a2791b9a8a6b1f35a4ecd767081af> (accessed July 2, 2021).
179. Federal Republic of Germany, Federal Ministry of Defence, Bundeswehr, Cyber and Information Domain Service, “Cyber and Information Space—A New Domain,” <https://www.bundeswehr.de/en/organization/the-cyber-and-information-domain-service> (accessed July 2, 2021).
180. International Institute for Strategic Studies, *The Military Balance 2019: The Annual Assessment of Global Military Capabilities and Defence Economics* (London: Routledge, 2019), p. 106.
181. *Information from the Parliamentary Commissioner for the Armed Forces: Annual Report 2020 (62nd Report)*, German Bundestag, 19th Electoral Term, *Printed Paper* No. 19/26600, February 23, 2021, p. 78, https://www.bundestag.de/resource/blob/839232/el864120697c27057534944ceb20111/annual_report_2020_62nd_report-data.pdf (accessed July 2, 2021).
182. *Ibid.*, p. 79.
183. *Ibid.*
184. *Ibid.*, p. 78.
185. *Ibid.*, p. 84.
186. Dan Parsons, “Germany Cancels Heavy-Lift Helicopter Competition,” *Vertical*, September 29, 2020, <https://verticalmag.com/news/germany-cancels-heavy-lift-helicopter-competition/> (accessed July 2, 2021).
187. *Information from the Parliamentary Commissioner for the Armed Forces*, p. 80.
188. Michael Peck, “Why Pilots Are Quitting the German Air Force,” *The National Interest*, The Reboot Blog, January 28, 2021, <https://nationalinterest.org/blog/reboot/why-pilots-are-quitting-german-air-force-177240> (accessed July 2, 2021).
189. *Ibid.*
190. *Information from the Parliamentary Commissioner for the Armed Forces*, p. 41.
191. *Information from the Parliamentary Commissioner for the Armed Forces*, p. 81.
192. Deutsche Welle, “German Submarines Fitted with Russian Technology: Report,” March 28, 2021, <https://www.dw.com/en/german-submarines-fitted-with-russian-technology-report/a-57030819> (accessed July 2, 2021).
193. Tyler Rogoway, “The German Navy Decided to Return Their Bloated New Frigate to the Ship Store This Christmas,” *The War Zone*, December 23, 2017, <http://www.thedrive.com/the-war-zone/17185/the-german-navy-has-decided-to-return-their-new-frigate-to-the-ship-store-this-christmas> (accessed July 2, 2021).
194. William Wilkes, “German Engineering Yields New Warship That Isn’t Fit for Sea,” *The Wall Street Journal*, January 12, 2018, <https://www.wsj.com/articles/german-engineering-yields-new-warship-that-isnt-fit-for-sea-1515753000> (accessed July 2, 2021).
195. John Beckner and Helmoed Heitman, “Is Germany’s Navy Dead?” *The National Interest*, The Buzz Blog, July 23, 2018, <https://nationalinterest.org/blog/buzz/germanys-navy-dead-26566> (accessed July 2, 2021).
196. Ross Clark, “Germany’s Military Has Become a Complete Joke,” *The Spectator*, August 31, 2019, <https://www.spectator.co.uk/article/germany-s-military-has-become-a-complete-joke> (accessed July 2, 2021).
197. “Germany Returns Lead F125 Frigate to Builder, Report,” *Naval Today*, December 22, 2017, <https://navaltoday.com/2017/12/22/germany-returns-lead-f125-frigate-to-builder-report/> (accessed June 5, 2021).
198. “Germany’s Third F125 Baden-Württemberg-Class Frigate Delivered by TKMS,” *Naval News*, March 30, 2021, <https://www.navalnews.com/naval-news/2021/03/germanys-third-f125-baden-wuerttemberg-class-frigate-delivered-by-tkms/> (accessed June 5, 2021).
199. “Damen Wins Giant Contract for Four German Navy Frigates,” *The Maritime Executive*, January 14, 2020, <https://www.maritime-executive.com/article/damen-wins-giant-contract-for-four-german-navy-frigates> (accessed July 2, 2021).
200. International Institute for Strategic Studies, *The Military Balance 2021: The Annual Assessment of Global Military Capabilities and Defence Economics* (London: Routledge, 2021), p. 107.
201. International Institute for Strategic Studies, *The Military Balance 2020: The Annual Assessment of Global Military Capabilities and Defence Economics* (London: Routledge, 2020), p. 76.
202. *Information from the Parliamentary Commissioner for the Armed Forces*, p. 9.
203. Alex Berry, “Germany Launches New Voluntary Military Service Program,” Deutsche Welle, April 6, 2021, <https://www.dw.com/en/germany-launches-new-voluntary-military-service-program/a-57105974> (accessed June 5, 2021).
204. Charlie Gao, “Germany’s Air Force Is Going All in on the F/A-18 Super Hornet,” *The National Interest*, The Buzz Blog, March 28, 2020, <https://nationalinterest.org/blog/buzz/germanys-air-force-going-all-fa-18-super-hornet-138332> (accessed March 30, 2020).

205. Andrea Shalal, "Exclusive: Germany Sees 8.86 Billion Euro Cost to Operate Tornado Jets to 2030," Reuters, April 10, 2019, <https://www.reuters.com/article/us-germany-fighter-tornado-exclusive/exclusive-germany-sees-8-86-billion-euro-cost-to-operate-tornado-jets-to-2030-idUSKCNIRM219> (accessed June 5, 2021).
206. Douglas Barrie, "Dogfight over Berlin: Germany's Tornado Replacement Aspirations," International Institute for Strategic Studies, Military Balance Blog, December 21, 2017, <https://www.iiss.org/blogs/military-balance/2017/12/berlin> (accessed July 2, 2021).
207. Joseph Trevithick, "Nukes Drive Germany's Plan to Replace Tornados with Typhoons, Super Hornets, and Growlers," The War Zone, March 26, 2020, <https://www.thedrive.com/the-war-zone/32768/nukes-drive-germanys-plan-to-replace-tornados-with-typhoons-super-hornets-and-growlers> (accessed July 2, 2021).
208. Ibid.
209. Gao, "Germany's Air Force Is Going All in on the F/A-18 Super Hornet."
210. International Institute for Strategic Studies, *The Military Balance 2021*, p. 70.
211. Inder Singh Bisht, "German Coalition Partners Approve 'Unarmed' Eurodrone Project," The Defense Post, February 4, 2021, <https://www.thedefensepost.com/2021/02/04/german-coalition-approves-eurodrone/> (accessed July 2, 2021).
212. Sebastian Sprenger, "German Defense Minister Vows to Keep Fighting for Armed Drones," *Defense News*, April 16, 2021, <https://www.defensenews.com/global/europe/2021/04/16/german-defense-secretary-vows-to-keep-fighting-for-armed-drones/> (accessed July 2, 2021).
213. Sebastian Sprenger, "Germany Shelves New Anti-Missile Weapon and Turns to Drone Defense," *Defense News*, March 23, 2021, <https://www.defensenews.com/global/europe/2021/03/23/germany-shelves-new-anti-missile-weapon-and-turns-to-drone-defense/> (accessed July 2, 2021).
214. International Institute for Strategic Studies, *The Military Balance 2021*, p. 67.
215. Table, "Orders, Deliveries, in Operation Military Aircraft by Country—Worldwide," summary to April 30, 2021, in Airbus, "Defence: Orders & Deliveries," <https://www.airbus.com/defence.html> (accessed July 20, 2021).
216. Federal Republic of Germany, Federal Ministry of Defence, "Year-End Spurt in Bundeswehr Procurement," December 17, 2020, <https://www.defense-aerospace.com/articles-view/release/3/214931/germany-to-retrofit-more-a400ms-and-nh90-helicopters.html> (accessed July 2, 2021).
217. Trevithick, "Germany, France Move Ahead with Joint C-130J Unit amid Budget Woes and A400M Delays," The War Zone, May 8, 2018, <https://www.thedrive.com/the-war-zone/20697/germany-france-move-ahead-with-joint-c-130j-unit-amid-budget-woes-and-a400m-delays> (accessed June 30, 2021).
218. Lockheed Martin, "Hercules Training Takes Off for France & Germany," <https://www.lockheedmartin.com/en-us/news/features/2020/hercules-training-takes-off-for-france-and-germany.html> (accessed July 2, 2021).
219. Xavier Vavas seur, "Germany Seemingly Selects P-8A Poseidon over ATL2 as 'Interim' Replacement for P-3C MPA," *Naval News*, May 3, 2021, <https://www.navalnews.com/naval-news/2021/05/germany-seemingly-selects-p-8a-poseidon-over-atl2-as-interim-replacement-for-p-3c-mpa/> (accessed June 5, 2021).
220. North Atlantic Treaty Organization, *The Secretary General's Annual Report 2020*, p. 50.
221. Christina Mackenzie, "Despite Pressure from Lawmakers and Pandemic, French Defense Budget to Remain Unchanged," *Defense News*, October 5, 2020, <https://www.defensenews.com/global/europe/2020/10/05/despite-pressure-from-lawmakers-and-pandemic-french-defense-budget-to-remain-unchanged/> (accessed June 5, 2021).
222. Christina Mackenzie, "See France Test-Fire an M51 Strategic Missile into the Atlantic," *Defense News*, April 28, 2021, <https://www.defensenews.com/global/europe/2021/04/28/france-test-fires-an-m51-strategic-missile-into-the-atlantic/> (accessed June 5, 2021).
223. International Institute for Strategic Studies, *The Military Balance 2021*, p. 102.
224. Christina Mackenzie, "France to Begin Building New Ballistic Missile Subs," *Defense News*, February 22, 2021, <https://www.defensenews.com/naval/2021/02/22/france-to-begin-building-new-ballistic-missile-subs/> (accessed June 5, 2021).
225. Ibid.
226. Christina Mackenzie, "Macron Kicks off French Race to Build a New Nuclear-Powered Aircraft Carrier," *Defense News*, December 8, 2020, <https://www.defensenews.com/global/europe/2020/12/08/macron-kicks-off-french-race-to-build-a-new-nuclear-powered-aircraft-carrier/> (accessed June 5, 2021).
227. Emmanuel Huberdeau, "France Launches First Barracuda SSN," *Jane's Defense Weekly*, July 12, 2019, <https://www.janes.com/defence-news/news-detail/france-launches-first-barracuda-ssn> (accessed July 2, 2021), and "New Suffren Barracuda-Class Nuclear-Powered Attack Submarine Officially Commissioned by French Navy," *Navy Recognition*, November 2020, <https://www.navyrecognition.com/index.php/news/defence-news/2020/november/9236-new-suffren-barracuda-class-nuclear-powered-attack-submarine-officially-commissioned-by-french-navy.html> (accessed June 5, 2021).

228. “France Accelerates the FDI Frigates Program,” *Navy Recognition*, March 2021, <https://www.navyrecognition.com/index.php/news/defence-news/2021/march/9901-france-accelerates-the-fdi-frigates-program.html> (accessed June 5, 2021).
229. Christina Mackenzie, “Naval Group Delivers French Frigate with Bolstered Capabilities,” *Defense News*, April 16, 2021, <https://www.defensenews.com/naval/2021/04/16/naval-group-delivers-french-frigate-with-bolstered-capabilities/> (accessed June 5, 2021).
230. Christina Mackenzie, “French Navy Begins Broad Revamp of Its Mine-Hunting Abilities,” *Defense News*, November 6, 2020, <https://www.defensenews.com/global/europe/2020/11/06/french-navy-begins-broad-revamp-of-its-mine-hunting-abilities/> (accessed June 5, 2021).
231. Harry Lye, “UK, France to Sign Autonomous Minehunting Production Contract,” *Naval Technology*, November 3, 2020, <https://www.naval-technology.com/news/contract-news/uk-france-to-sign-autonomous-minehunting-production-contract/> (accessed July 2, 2021).
232. Christina Mackenzie, “French Army Orders 364 Serval Armored Vehicles,” *Defense News*, January 15, 2021, <https://www.defensenews.com/land/2021/01/15/french-army-orders-364-serval-armored-vehicles/> (accessed June 5, 2021).
233. Tong Ong, “Parrot to Supply French Army with Hundreds of Micro-Drones,” *The Defense Post*, January 12, 2021, <https://www.thedefensepost.com/2021/01/12/french-army-parrot-micro-drones/> (accessed July 2, 2021).
234. Mackenzie, “French Army Orders 364 Serval Armored Vehicles.”
235. Staff Writer with Agence France-Presse, “France Receives Second Lockheed KC-130J, Completing Delivery of 4 Super Hercules Aircraft,” *The Defense Post*, February 10, 2020, <https://www.thedefensepost.com/2020/02/10/france-lockheed-kc-130j-super-hercules/> (accessed July 2, 2021).
236. Table, “Orders, Deliveries, in Operation Military Aircraft by Country—Worldwide.”
237. Thierry Dubois, “French Air Force Receives Newest-Standard Airbus A400M,” *Aviation Week Network*, April 6, 2021, <https://aviationweek.com/defense-space/multi-mission-transport-aircraft/french-air-force-receives-newest-standard-airbus> (accessed July 2, 2021).
238. Christina Mackenzie, “France Orders Beefed-Up NH90 Choppers for Special Operations,” *Defense News*, October 12, 2020, <https://www.defensenews.com/global/europe/2020/10/12/france-orders-beefed-up-nh90-choppers-for-special-operations/> (accessed June 5, 2021).
239. David Donald, “France Launches Rafale F4 Upgrade,” *AINonline*, January 24, 2019, <https://www.ainonline.com/aviation-news/defense/2019-01-24/france-launches-rafale-f4-upgrade> (accessed July 2, 2021).
240. Christina Mackenzie, “France Orders \$2.3 Billion Upgrade for Rafale Warplanes,” *Defense News*, January 14, 2019, <https://www.defensenews.com/global/europe/2019/01/14/france-orders-upgraded-rafale-warplanes-for-23-billion/> (accessed June 5, 2021).
241. Younis Dar, “New F4 Rafale Fighter Jets to Have Advanced Stealth & EWS; Is India a Potential Customer?” *The Eurasian Times*, April 5, 2021, <https://eurasianimes.com/new-f4-rafale-fighter-jets-to-have-advanced-stealth-is-india-a-potential-customer/> (accessed July 2, 2021).
242. Ibid.
243. “French Air and Space Force to Receive 12 New Rafales from Dassault,” *Air Force Technology*, February 1, 2021, <https://www.airforce-technology.com/news/french-air-and-space-force-to-receive-12-new-rafales-from-dassault/> (accessed July 2, 2021), and Christina Mackenzie, “France Begins Backfilling Its Rafale Fleet After Selling Some to Greece,” *Defense News*, January 29, 2021, <https://www.defensenews.com/global/europe/2021/01/29/france-begins-backfilling-its-rafale-fleet-after-selling-some-to-greece/> (accessed June 5, 2021).
244. Reuters, “Germany, France, Spain Aim for Fighter Jet Agreement Next Week,” May 1, 2021, <https://www.reuters.com/world/europe/germany-france-spain-aim-fighter-jet-agreement-next-week-2021-05-01/> (accessed June 5, 2021).
245. Christina Mackenzie, “France Plans to Boost Its Self-Defense Posture in Space,” *Defense News*, July 26, 2019, <https://www.defensenews.com/global/europe/2019/07/26/france-plans-to-boost-its-self-defense-posture-in-space/> (accessed June 5, 2021).
246. Christina Mackenzie, “NATO Names Location for New Military Space Center,” *Defense News*, February 5, 2021, <https://www.defensenews.com/space/2021/02/05/nato-names-location-for-new-military-space-center/> (accessed June 5, 2021).
247. Ibid.
248. Lauren Chadwick and Jeremy Wilks, “‘May the Force Be with Vous’: France Unveils Space Weapons Plan,” *Euronews*, updated July 26, 2019, <https://www.euronews.com/2019/07/26/may-the-force-be-with-vous-france-unveils-space-weapons-plan> (accessed July 9, 2021), and Rachel Cordery, “French Defence Minister Announces Anti-Satellite Laser Weapons,” *Air Force Technology*, July 26, 2019, <https://www.airforce-technology.com/news/french-anti-satellite-laser-weapon/> (accessed July 9, 2021).
249. Deutsche Welle, “France Conducts First Military Exercises in Space,” March 10, 2021, <https://www.dw.com/en/france-conducts-first-military-exercises-in-space/a-56821868> (accessed June 5, 2021).

250. Marine Pennetier, "Under Threat, France Grooms Army Hackers for Cyber Warfare," Reuters, April 5, 2017, <https://www.reuters.com/article/us-france-cyber/under-threat-france-grooms-army-hackers-for-cyber-warfare-idUSKBN1771B2> (accessed July 2, 2021).
251. Arthur P. B. Laudrain, "France's New Offensive Cyber Doctrine," Lawfare, February 26, 2019, <https://www.lawfareblog.com/frances-new-offensive-cyber-doctrine> (accessed July 2, 2021).
252. International Institute for Strategic Studies, *The Military Balance 2019*, p. 66.
253. Republic of France, Ministry of Armed Forces, "Opérations: Dispositif Opérationnel Français Déployé à Travers Le Monde" (Operations: French Operational Device Deployed Throughout the World), Republic of France, Ministry of Armed Forces, update June 15, 2021, https://www.defense.gouv.fr/english/operations/rubriques_complementaires/dispositif-operationnel-francais-deploye-a-travers-le-monde (accessed July 2, 2021).
254. Xavier Vavas seur, "French Carrier Strike Group Begins 2021 Deployment," U.S. Naval Institute News, February 23, 2021, <https://news.usni.org/2021/02/23/french-carrier-strike-group-begins-2021-deployment> (accessed July 2, 2021).
255. News release, "U.S., French Carrier Strike Groups Conduct Dual Carrier Operations in 5th Fleet," U.S. Naval Forces Central Command Public Affairs, April 15, 2021, <https://www.navy.mil/Press-Office/News-Stories/Article/2573492/us-french-carrier-strike-groups-conduct-dual-carrier-operations-in-5th-fleet/> (accessed July 2, 2021).
256. Fact sheet, "NATO's Enhanced Forward Presence."
257. Baltic News Service, "France to Take over NATO Baltic Air Policing Duties at Ämari," ERR—Estonian Public Broadcasting, April 25, 2021, <https://news.err.ee/1082229/france-to-take-over-nato-baltic-air-policing-duties-at-amari> (accessed July 2, 2021).
258. Archyde, "French Armed Forces Prepare for High Intensity War," March 30, 2021, <https://www.archyde.com/french-armed-forces-prepare-for-high-intensity-war/> (accessed July 2, 2021), and "The French Armed Forces Are Planning for High-Intensity War," March 31, 2021, *The Economist*, <https://www.economist.com/europe/2021/03/31/the-french-armed-forces-are-planning-for-high-intensity-war> (accessed July 2, 2021).
259. Republic of France, Ministry of Armed Forces, "Opérations: Dispositif Opérationnel Français Déployé à Travers Le Monde."
260. Ibid.
261. Ibid.
262. Abhijnan Rej, "France-Led Multination Naval Exercise Commences in Eastern Indian Ocean," *The Diplomat*, April 5, 2021, <https://thediplomat.com/2021/04/france-led-multination-naval-exercise-commences-in-eastern-indian-ocean/> (accessed July 2, 2021).
263. Reuters, "French Nuclear Submarine Patrolled in South China Sea—Navy," February 9, 2021, <https://www.reuters.com/article/southchina-sea-france-submarine-idUSL1N2KF1J7> (accessed June 5, 2021).
264. Ibid.
265. France 24, "Macron Launches Army Operation Resilience to Support Fight Against Coronavirus," March 25, 2020, <https://www.france24.com/en/20200325-macron-launches-army-operation-resilience-to-support-fight-against-coronavirus> (accessed July 2, 2021).
266. Middle East Eye, "France: Knife Attack in Nice Leaves Three Dead, Several Injured," October 29, 2020, <https://www.middleeasteye.net/news/france-nice-attack-knife-dead-injured> (accessed July 2, 2021).
267. International Institute for Strategic Studies, *The Military Balance 2021*, p. 101.
268. Ibid.
269. North Atlantic Treaty Organization, *The Secretary General's Annual Report 2020*, p. 50.
270. Joseph Trevithick, "Everything We Know About the United Kingdom's Big New Defense Spending Plan," The War Zone, November 19, 2020, <https://www.thedrive.com/the-war-zone/37722/everything-we-know-about-the-united-kingdoms-big-new-defense-spending-plan> (accessed July 2, 2021).
271. Ibid.
272. Andrew Chuter, "UK Should Rethink Deadline for Defense, Foreign Policy Review, Says Former National Security Adviser," *Defense News*, March 19, 2020, <https://www.defensenews.com/global/europe/2020/03/19/uk-should-rethink-deadline-for-defense-foreign-policy-review-says-former-national-security-adviser/> (accessed July 20, 2021).
273. Andrew Chuter, "British Defense Secretary Says 'Tough Choices' Are Coming Due on Spending," *Defense News*, December 11, 2020, <https://www.defensenews.com/global/europe/2020/12/11/british-defense-secretary-says-tough-choices-are-coming-due-on-spending/> (accessed July 2, 2021).

274. Guy Anderson, Jon Hawkes, Gareth Jennings, and Kate Tringham, "The UK's Integrated Review and Defence Command Paper," *Janes*, March 23, 2021, <https://www.janes.com/defence-news/news-detail/the-uk-s-integrated-review-and-defence-command-paper> (accessed July 2, 2021).
275. Staff Writer with Agence France-Presse, "UK to Unveil Global Focus in Defense Modernization Plans," *The Defense Post*, March 22, 2021, <https://www.thedefensepost.com/2021/03/22/uk-defense-modernization-plans/> (accessed July 2, 2021).
276. Daniel Kochis, "European Defense Spending Still Rising, but COVID-19 Poses Retrenching Risk," Heritage Foundation *Commentary*, April 6, 2021, <https://www.heritage.org/europe/commentary/european-defense-spending-still-rising-covid-19-poses-retrenching-risk>.
277. Douglas Barrie, Ben Barry, Henry Boyd, and Nick Childs, "The UK's New Model Forces," International Institute for Strategic Studies, Analysis Blog, March 24, 2021, <https://www.iiss.org/blogs/analysis/2021/03/uk-defence-command-paper> (accessed July 2, 2021).
278. Ibid.
279. Andrew Chuter, "British Army Admits More Delays in Fielding Enough Combat Forces," *Defense News*, October 12, 2020, <https://www.defensenews.com/global/europe/2020/10/12/british-army-admits-more-delays-in-fielding-enough-combat-forces/> (accessed June 4, 2021), and Ben Barry, "British Army Heavy Division Comes up Light," International Institute for Strategic Studies, Military Balance Blog, January 8, 2021, <https://www.iiss.org/blogs/military-balance/2021/01/british-army-heavy-division> (accessed June 4, 2021).
280. Chuter, "British Army Admits More Delays in Fielding Enough Combat Forces,"
281. Ibid.
282. Andrew Chuter and Sebastian Sprenger, "British Military Looks to the 'Eurotank' as It Weighs Its Hardware Options," *Defense News*, January 11, 2021, <https://www.defensenews.com/global/europe/2021/01/11/british-military-looks-to-the-eurotank-as-it-weighs-its-hardware-options/> (accessed June 2, 2021).
283. Samuel Cranny-Evans, "UK to Reduce Operational Challenger 2 Tank Fleet," *Janes*, April 23, 2019, <https://www.janes.com/defence-news/news-detail/uk-to-reduce-operational-challenger-2-tank-fleet> (accessed July 2, 2021).
284. David Axe, "British Army Is Planning to Upgrade Just 148 of Its 227 Challenger 2 Tanks," *The National Interest*, The Buzz Blog, April 21, 2019, <https://nationalinterest.org/blog/buzz/british-army-planning-upgrade-just-148-its-227-challenger-2-tanks-53587> (accessed June 5, 2021).
285. David Axe, "British Army, German Tanks. London Might Not Like It, But It Needs to Buy Leopard 2s," *Forbes*, November 11, 2020, <https://www.forbes.com/sites/davidaxe/2020/11/11/british-army-german-tanks-london-might-not-like-it-but-it-needs-to-buy-leopard-2s/?sh=32f598922d7a> (accessed June 5, 2021).
286. Cranny-Evans, "UK to Reduce Operational Challenger 2 Tank Fleet."
287. British Ministry of Defence, *Defence in a Competitive Age*, Presented to Parliament by the Secretary of State for Defence by Command of Her Majesty, March 2021, p. 54, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/974661/CP411_-_Defence_Command_Plan.pdf (accessed July 2, 2021).
288. Stuart Crawford, "The Future UK Main Battle Tank Fleet," *UK Defence Journal*, March 22, 2021, <https://ukdefencejournal.org.uk/the-future-uk-main-battle-tank-fleet/> (accessed July 2, 2021).
289. Andrew Chuter, "British Army Wants More Punch in Its Boxer Vehicle Fleet," *Defense News*, April 6, 2021, <https://www.defensenews.com/global/europe/2021/04/06/british-army-wants-more-punch-in-its-boxer-vehicle-fleet/> (accessed July 2, 2021).
290. British Ministry of Defence, "What We Do: Equipping and Supporting the British Army: Boxer," February 19, 2021, <https://des.mod.uk/what-we-do/army-procurement-support/boxer-mechanised-infantry/> (accessed July 2, 2021).
291. Chuter, "British Army Wants More Punch in Its Boxer Vehicle Fleet."
292. Craig Hoyle, "Lockheed Sees No Change to UK F-35 Commitment, Despite Ambiguous Review," *Flight Global*, March 24, 2021, <https://www.flightglobal.com/defence/lockheed-sees-no-change-to-uk-f-35-commitment-despite-ambiguous-review/143015.article> (accessed July 2, 2021).
293. Ibid.
294. Dominic Nicholls, "Britain's New F35 Stealth Jets Used on Operations for the First Time," *The Telegraph*, June 25, 2019, <https://www.telegraph.co.uk/news/2019/06/24/britains-new-f35-stealth-jets-used-operations-first-time/> (accessed July 2, 2021).
295. Ed Adamczyk, "Britain's Royal Air Force Receives Last Typhoon Fighter on Order from BAE," United Press International, September 27, 2019, <https://www.upi.com/Defense-News/2019/09/27/Britains-Royal-Air-Force-receives-last-Typhoon-fighter-on-order-from-BAE/7821569598752/> (accessed July 2, 2021).

296. George Allison, "24 Typhoon Aircraft to Be Retired by 2025," *UK Defence Journal*, March 22, 2021, <https://ukdefencejournal.org.uk/24-typhoon-aircraft-to-be-retired-by-2025/> (accessed July 2, 2021).
297. Andrew Chuter, "The British Air Force Is Upgrading Its Typhoon Fighter Jets to Keep Them Fighting Until 2040," *Business Insider*, August 9, 2019, <https://www.businessinsider.com/british-air-force-sensor-upgrades-typhoon-fighter-jets-2019-8> (accessed July 2, 2021).
298. "UK Defence to Invest £2bn in Combat Air System Tempest," *Government Computing*, March 25, 2021, <https://www.governmentcomputing.com/national-security/news/uk-defence-to-invest-2bn-in-combat-air-system-tempest/> (accessed July 2, 2021).
299. Alan Warnes, "NATO Air-to-Air Refuelling," *European Security & Defense*, December 13, 2019, <https://euro-sd.com/2019/12/articles/15526/nato-air-to-air-refuelling/> (accessed July 2, 2021).
300. British Royal Air Force, "Aircraft: RC-135W Rivet Joint: About the RC-135W Rivet Joint," <https://www.raf.mod.uk/aircraft/airseeker-rc-135w-rivet-joint/> (accessed July 2, 2021).
301. Table, "Orders, Deliveries, in Operation Military Aircraft by Country—Worldwide."
302. News release, "RAF Sentinel R1 Aircraft Conducts Last Operational Flight," British Royal Air Force, February 26, 2021, <https://www.raf.mod.uk/news/articles/raf-sentinel-r1-aircraft-conducts-last-operational-flight/> (accessed July 2, 2021).
303. Gareth Jennings, "Fifth RAF Poseidon Arrives in UK," *Janes*, February 2, 2021, <https://www.janes.com/defence-news/news-detail/fifth-raf-poseidon-arrives-in-uk> (accessed July 2, 2021).
304. David Axe, "The Royal Air Force Needs More Patrol Planes," *The National Interest*, The Buzz Blog, January 1, 2020, <https://nationalinterest.org/blog/buzz/royal-air-force-needs-more-patrol-planes-110231> (accessed June 5, 2021).
305. Harry Lye, "UK's New Medium Helicopter to Fly into 2040s," *Army Technology*, April 8, 2021, <https://www.army-technology.com/news/uk-medium-helicopter-requirement/> (accessed July 2, 2021).
306. David B. Larter, "In a Naval Confrontation with Iran, Great Britain Can Find Neither Ships nor Friends," *Defense News*, July 25, 2019, <https://www.defensenews.com/naval/2019/07/25/in-a-naval-confrontation-with-iran-great-britain-can-find-neither-ships-nor-friends/> (accessed July 2, 2021).
307. Ibid. and David Axe, "The Royal Navy Keeps Shrinking—Frigates to Drop by Three over Five Years," *Forbes*, February 12, 2021, <https://www.forbes.com/sites/davidaxe/2021/02/12/the-royal-navy-keeps-shrinking-frigates-to-drop-by-three/> (accessed July 2, 2021).
308. Axe, "The Royal Navy Keeps Shrinking—Frigates to Drop by Three over Five Years."
309. Ibid.
310. Barrie et al., "The UK's New Model Forces."
311. Tony Driver and Dominic Nicholls, "Sailor Shortage Means Four of Navy's 13 Frigates Have Not Spent a Single Day at Sea This Year, MoD Data Reveal," *The Telegraph*, October 18, 2018, <https://www.telegraph.co.uk/news/2018/10/18/sailor-shortage-means-four-navys-13-frigates-have-not-spent/> (accessed July 2, 2021).
312. David Axe, "The Royal Navy's New Type 26 Frigate Could Be One Killer Warship," *The National Interest*, The Buzz Blog, August 11, 2019, <https://nationalinterest.org/blog/buzz/royal-navy%E2%80%99s-new-type-26-frigate-could-be-one-killer-warship-72876> (accessed June 5, 2021).
313. News release, "Ministry of Defence Announces Procurement Programme for Royal Navy's T31e Frigates," British Royal Navy, September 7, 2017, <https://www.royalnavy.mod.uk/news-and-latest-activity/news/2017/september/07/170907-t31e-frigate-announcement> (accessed July 3, 2021). See also George Allison, "MoD Announce Programme for Royal Navy Type 31e Frigate and Detail Requirements," *UK Defence Journal*, September 7, 2017, <https://ukdefencejournal.org.uk/mod-announce-procurement-programme-royal-navy-type-31e-frigate/> (accessed July 3, 2021).
314. Alan West, "The Royal Navy's Five New Frigates Isn't Enough to Keep Britain Safe," *The Spectator*, September 21, 2019, <https://www.spectator.co.uk/article/the-royal-navy-s-five-new-frigates-isn-t-enough-to-keep-britain-safe> (accessed July 3, 2021).
315. News release, "Carrier Strike Group Deployment to Visit 40 Countries," British Royal Navy, April 26, 2021, <https://www.royalnavy.mod.uk/news-and-latest-activity/news/2021/april/26/210426-csg21-deployment> (accessed July 3, 2021).
316. David Donald, "UK Carrier Strike Group Begins Deployment," *AINonline*, May 4, 2021, <https://www.ainonline.com/aviation-news/defense/2021-05-04/uk-carrier-strike-group-begins-deployment> (accessed July 3, 2021).
317. James Hirst, "Prince Charles Attends Commissioning of HMS Prince of Wales," *Forces.net*, December 10, 2019, <https://www.forces.net/news/prince-charles-attend-commissioning-hms-prince-wales> (accessed July 3, 2021).

318. Berenice Baker and Harry Lye, "HMS Prince of Wales to Begin F-35 Trials in January 2021: Exclusive," *Naval Technology*, March 2, 2020, <https://www.naval-technology.com/news/hms-prince-of-wales-to-begin-f-35-trials-in-january-2021-exclusive/> (accessed July 3, 2021), and Jemma Carr, "HMS Prince of Wales Returns to the Sea After Two Leaks in Five Months," *Daily Mail*, January 5, 2021, <https://www.msn.com/en-gb/news/world/hms-prince-of-wales-returns-to-the-sea-after-two-leaks-in-five-months/ar-BB1gf5KJ?MSCC=1604183894> (accessed July 3, 2021).
319. Carr, "HMS Prince of Wales Returns to the Sea After Two Leaks in Five Months,"
320. David Axe, "Attention Navy Fans, Britain's Type 26 Frigate Is Nearly Here," *The National Interest*, The Buzz Blog, September 1, 2019, <https://nationalinterest.org/blog/buzz/attention-navy-fans-britains-type-26-frigate-nearly-here-77006> (accessed June 5, 2021), and Dominic Nicholls, "Britain's New F35 Stealth Jets Used on Operations for the First Time," *The Telegraph*, June 25, 2019, <https://www.telegraph.co.uk/news/2019/06/24/britains-new-f35-stealth-jets-used-operations-first-time/> (accessed June 5, 2021).
321. "BAE Systems Launches Fifth State-of-the-Art Astute Class Attack Submarine," Institution of Mechanical Engineers, Professional Engineering, April 21, 2021, <https://www.imeche.org/news/news-article/bae-systems-launches-fifth-state-of-the-art-astute-class-attack-submarine> (accessed July 3, 2021).
322. Harry Lye, "Royal Navy to Begin Unmanned Minehunting Operations," *Naval Technology*, January 14, 2020, <https://www.naval-technology.com/news/royal-navy-to-begin-unmanned-minehunting-operations/> (accessed July 3, 2021).
323. British Ministry of Defence, Defence Nuclear Organisation, "Guidance: Dreadnought Submarine Programme: Factsheet," updated March 16, 2021, <https://www.gov.uk/government/publications/successor-submarine-programme-factsheet/successor-submarine-programme-factsheet> (accessed July 3, 2021).
324. Dan Taylor, "MoD 'Orders Review into Concerns over Dreadnought Submarine Programme,'" *The Mail*, May 5, 2021, <https://www.nwemail.co.uk/news/19278533.mod-orders-review-concerns-dreadnought-submarine-programme/> (accessed July 3, 2021).
325. International Institute for Strategic Studies, *The Military Balance 2020*, p. 85.
326. Dan Sabbagh, "British Army Recruits Rise as Covid Seems to Act as 'Rallying Cry,'" *The Guardian*, January 6, 2021, <https://www.theguardian.com/uk-news/2021/jan/07/british-army-recruits-rise-as-covid-seems-to-act-as-rallying-cry> (accessed July 3, 2021).
327. British Ministry of Defence and The Rt Hon Ben Wallace MP, "RAF Typhoons Begin NATO Air Policing Mission in Lithuania," May 1, 2020, <https://www.gov.uk/government/news/raf-typhoons-begin-nato-air-policing-mission-in-lithuania> (accessed July 3, 2021).
328. News release, "RAF Typhoons Arrive in Romania to Resume NATO Air Policing Mission," British Royal Air Force, April 23, 2021, <https://www.raf.mod.uk/news/articles/raf-typhoons-arrive-in-romania-to-resume-nato-air-policing-mission/> (accessed July 3, 2021).
329. George Allison, "British Jets Complete Icelandic Air Policing Mission," *UK Defence Journal*, December 11, 2019, <https://ukdefencejournal.org.uk/british-jets-complete-icelandic-air-policing-mission/> (accessed July 3, 2021).
330. North Atlantic Treaty Organization, Resolute Support Mission, "Resolute Support Mission (RSM): Key Facts and Figures."
331. North Atlantic Treaty Organization, Kosovo Force (KFOR), "Key Facts and Figures."
332. North Atlantic Treaty Organization, "Standing NATO Mine Countermeasures Group One (SNMCMG1)," <https://mc.nato.int/snmcmg1> (accessed July 3, 2021).
333. British Ministry of Defence, "Operation SHADER Explained: Daesh's Demise," Medium, December 18, 2020, <https://medium.com/voices-of-the-armed-forces/operation-shader-explained-daeshs-demise-b4ab08c9104> (accessed July 9, 2021).
334. James Hirst, "UK to Increase Military Training Presence in Iraq," Forces.net, February 18, 2021, <https://www.forces.net/news/iraq/uk-increase-military-training-presence-iraq> (accessed July 3, 2021).
335. International Institute for Strategic Studies, *The Military Balance 2019*, p. 66.
336. North Atlantic Treaty Organization, *The Secretary General's Annual Report 2020*, p. 51.
337. Tom Kingston, "Italy Defense Budget Rebounds Despite Coronavirus," *Defense News*, October 28, 2020, <https://www.defensenews.com/global/europe/2020/10/28/italy-defense-budget-rebounds-despite-covid-crisis/> (accessed July 3, 2021).
338. David Cenciotti, "The Italian Air Force Has Received the First HH-1010A 'Caesar' in Overall Grey Color Scheme," The Aviationist, January 30, 2020, <https://theaviationist.com/2020/01/30/the-italian-air-force-has-received-the-first-hh-101a-caesar-in-overall-grey-color-scheme/> (accessed July 3, 2021), and Kingston, "Italy Defense Budget Rebounds Despite Coronavirus."
339. David Cenciotti and Stefano D'Urso, "Third Italian F-35B Goes to the Italian Air Force. And the Italian Navy Is Not Happy at All," The Aviationist, February 26, 2020, <https://theaviationist.com/2020/02/26/third-italian-f-35b-goes-to-the-italian-air-force-and-the-italian-navy-is-not-happy-at-all/> (accessed July 3, 2021).

340. Mansij Asthana, "Big Boost to Sixth-Gen Tempest Fighter Program as Italy and Sweden Ink Trilateral Agreement," *The EurAsian Times*, January 7, 2021, <https://eurasianimes.com/big-boost-to-sixth-gen-tempest-fighter-program-as-italy-uk-and-sweden-ink-trilateral-agreement/> (accessed July 3, 2021).
341. Tom Kington, "Italian Military Chief Envisions the Tempest Fighter Zapping Missiles," *Defense News*, April 13, 2021, <https://www.defensenews.com/global/europe/2021/04/13/italian-military-chief-envisions-the-tempest-fighter-zapping-missiles/> (accessed July 3, 2021).
342. Kington, "Italy Defense Budget Rebounds Despite Coronavirus," and Luca Peruzzi, "Italy's New Defence Budget Plan: What Is New?" *European Security & Defence*, September 19, 2019, <https://euro-sd.com/2019/09/articles/14456/italys-new-defence-budget-plan-what-is-new/> (accessed July 3, 2021).
343. Xavier Vavas seur, "Fincantieri Launched the Italian Navy's Tenth and Final FREMM Frigate," *Naval News*, January 27, 2020, <https://www.navalnews.com/naval-news/2020/01/fincantieri-launched-the-italian-navys-tenth-and-final-fremm-frigate/> (accessed July 3, 2021).
344. International Institute for Strategic Studies, *The Military Balance 2021*, p. 116.
345. Luca Peruzzi, "New Ships, Submarines and Weapon Systems for Italian Navy," *Naval News*, November 23, 2020, <https://www.navalnews.com/naval-news/2020/11/new-ships-submarines-and-weapon-systems-for-italian-navy/> (accessed July 3, 2021).
346. Kington, "Italy Defense Budget Rebounds Despite Coronavirus," and Luca Peruzzi, "Italy's Defence Multi-Year Planning Document 2020–2022," *European Security & Defence*, January 9, 2021, <https://euro-sd.com/2021/01/headline/20478/multi-year-planning-document/> (accessed July 3, 2021).
347. Infographic, "Operation Sea Guardian: Focused Security Patrol 20–3 | May 27–June 16, 2020," North Atlantic Treaty Organization, Allied Maritime Command, <https://mc.nato.int/media-centre/infographics/focops-203> (accessed July 3, 2021).
348. European Union, EUNAVFOR MED, Operation Sophia, "About Us," <https://www.operationsophia.eu/about-us/> (accessed July 10, 2021).
349. Italian Republic, Ministry of Defence, "Operation Safe Sea," June 19, 2015, <https://www.difesa.it/OperazioniMilitari/NazionaliInCorso/MareSicuro/Pagine/default.aspx> (accessed July 3, 2021). See also Italian Ministry of Defence, "Military Operations," <https://www.difesa.it/EN/Operations/Pagine/MilitaryOperations.aspx> (accessed July 10, 2021).
350. International Institute for Strategic Studies, *The Military Balance 2021*, p. 120.
351. North Atlantic Treaty Organization, "Standing NATO Mine Countermeasures Group Two (SNMCMG2)," <https://mc.nato.int/snmcmg2> (accessed July 3, 2021).
352. Fact sheet, "NATO's Enhanced Forward Presence."
353. North Atlantic Treaty Organization, Resolute Support Mission, "Resolute Support Mission (RSM): Key Facts and Figures."
354. International Institute for Strategic Studies, *The Military Balance 2021*, p. 119.
355. David Cenciotti, "Focus on the Tornado IDS with RecceLite II Pod Flying ISR Missions in Support of Operation Inherent Resolve," *The Aviationist*, December 3, 2020, <https://theaviationist.com/2020/12/03/focus-on-the-tornado-ids-with-recceelite-ii-pod-flying-isr-missions-in-support-of-operation-inherent-resolve/> (accessed July 3, 2021).
356. North Atlantic Treaty Organization, Kosovo Force (KFOR), "Key Facts and Figures."
357. LETA [Latvian Information Agency], Baltic News Service, TBT Staff, "Italy, Germany to Continue NATO's Baltic Air-Policing Mission for Another 3 Months," *The Baltic Times*, December 29, 2020, https://www.baltictimes.com/italy_germany_to_continue_nato_s_baltic_air-policing_mission_for_another_3_months/ (accessed July 3, 2021), and David Cenciotti, "The Italian F-35As Have Deployed to Estonia for NATO's Baltic Air Policing Mission," *The Aviationist*, April 30, 2021, <https://theaviationist.com/2021/04/30/italian-f35-estonia/> (accessed July 3, 2021).
358. Cenciotti, "The Italian F-35As Have Deployed to Estonia for NATO's Baltic Air Policing Mission."
359. North Atlantic Treaty Organization, Allied Air Command, "Italian Eurofighters to Enhance Air Policing Capabilities over Romania," April 29, 2019, <https://ac.nato.int/archive/2019/italian-eurofighters-enhance-air-policing-capabilities-over-romania> (accessed July 3, 2021).
360. News release, "Air Policing in Iceland. New Italian Air Patrol Operation," Embassy of Italy, Oslo, June 12, 2020, https://amboslo.esteri.it/ambasciata_oslo/en/ambasciata/news/dall_ambasciata/2020/06/air-policing.html#:~:text=Six%20F%2D35A%20fighters%20of,last%20for%20about%20two%20months (accessed July 3, 2021).
361. Daniel Kochis, "Poland: The Lynchpin of Security on NATO's Front Lines," Heritage Foundation *Issue Brief* No. 4455, August 17, 2015, <http://www.heritage.org/research/reports/2015/08/poland-the-lynchpin-of-security-on-natos-front-lines>.

362. International Institute for Strategic Studies, *The Military Balance 2021*, p. 132.
363. Christian Davies, “New Polish Military Force Worries Political Opposition,” *Politico*, November 16, 2016, <http://www.politico.eu/article/new-polish-military-force-worries-political-opposition/> (accessed July 3, 2021).
364. International Institute for Strategic Studies, *The Military Balance 2020*, p. 79.
365. Błaszczak, “Poland’s Defense Minister: Making the Constant Effort to Strengthen Defense.”
366. International Institute for Strategic Studies, *The Military Balance 2021*, p. 132.
367. International Institute for Strategic Studies, *The Military Balance 2018: The Annual Assessment of Global Military Capabilities and Defence Economics* (London: Routledge, 2018), p. 135, and Charlie Gao, “This Is How Poland Plans to Fight Russia in a War,” *The National Interest*, The Buzz Blog, March 3, 2018, <http://nationalinterest.org/blog/the-buzz/how-poland-plans-fight-russia-war-24731> (accessed July 3, 2021).
368. Mariusz Błaszczak, “Poland’s Defense Minister: COVID-19 Is Forcing the Military to Reexamine Its Role,” *Defense News*, January 11, 2021, <https://www.defensenews.com/outlook/2021/01/11/polands-defense-minister-covid-19-is-forcing-the-military-to-reexamine-its-role/> (accessed July 3, 2021).
369. International Institute for Strategic Studies, *The Military Balance 2020*, p. 79.
370. North Atlantic Treaty Organization, *The Secretary General’s Annual Report 2020*, p. 50.
371. International Institute for Strategic Studies, *The Military Balance 2020*, p. 81.
372. Błaszczak, “Poland’s Defense Minister: COVID-19 Is Forcing the Military to Reexamine Its Role.”
373. Jacek Siminski, “Polish MoD Adopts a New Technical Modernization Plan—Air Domain Focus. F-35 Top Priority,” *The Aviationist*, October 14, 2019, <https://theaviationist.com/2019/10/14/polish-mod-adopts-a-new-technical-modernization-plan-air-domain-focus-f-35-top-priority/> (accessed July 3, 2021).
374. Jaroslaw Adamowski, “Poland Inks \$4.6 Billion Contract for F-35 Fighter Jets,” *Defense News*, January 31, 2020, <https://www.defensenews.com/global/europe/2020/01/31/poland-inks-46-billion-contract-for-f-35-fighter-jets/> (accessed July 3, 2021), and David Axe, “Report: Poland Is Buying 32 F-35 Fighters (And Russia Won’t Like It),” *The National Interest*, The Buzz Blog, May 21, 2019, <https://nationalinterest.org/blog/buzz/report-poland-buying-32-f-35-fighters-and-russia-wont-it-58742> (accessed July 3, 2021).
375. David Donald, “Poland to Receive C-130Hs, Announces F-35 Base,” *AINonline*, April 15, 2021, <https://www.ainonline.com/aviation-news/defense/2021-04-15/poland-receive-c-130hs-announces-f-35-base> (accessed July 3, 2021).
376. Colton Jones, “Polish Minister of Defense Announces Lask as First F-35A Base,” *Defence Blog*, February 14, 2021, <https://defence-blog.com/polish-minister-of-defense-announces-lask-as-first-f-35a-base/> (accessed July 3, 2021).
377. Lidia Kelly, “Poland Signs \$4.75 Billion Deal for U.S. Patriot Missile System Facing Russia,” *Reuters*, March 28, 2018, <https://www.reuters.com/article/us-raytheon-poland-patriot/poland-united-states-sign-4-75-billion-deal-on-patriot-missiles-idUSKBN1H417S> (accessed June 5, 2021).
378. Staff Sgt. Andrew Mallett, “U.S. and Poland Continue to Grow Air Defense Powerhouse,” *U.S. Army*, August 20, 2020, https://www.army.mil/article/238302/u_s_and_poland_continue_to_grow_air_defense_powerhouse (accessed June 5, 2021).
379. Associated Press, “Poland to Pay \$414M for US-Made Rocket Launching System,” February 10, 2019, <https://www.apnews.com/573c2f35ffea4cbfb65edb90aa22c0ff> (accessed July 3, 2021).
380. Jaroslaw Adamowski, “Poland Acquires AW101 Helos for Navy Under \$430M Deal,” *Defense News*, April 29, 2019, https://www.defensenews.com/global/europe/2019/04/29/poland-acquires-aw101-helos-for-navy-under-430m-deal/?utm_source=clavis (accessed July 3, 2021).
381. Aaron Mehta, “Poland, Canada Join NATO Members in Potential Maritime Surveillance Aircraft Buy,” *Defense News*, February 15, 2018, <https://www.defensenews.com/smr/munich-security-forum/2018/02/15/poland-canada-join-nato-members-in-potential-maritime-surveillance-aircraft-buy/> (accessed July 3, 2021).
382. Staff Writer with Agence France-Press, “US Approves Sale to Poland of 180 Javelin Guided Missiles,” *The Defense Post*, March 5, 2020, <https://www.thedefensepost.com/2020/03/05/us-sale-poland-javelin-missiles-approved/> (accessed July 3, 2021).
383. Jacek Siminski, “Poland Signs Excess Defense Article Deal Procuring Five Extra C-130Hs (Resurrected from the ‘Boneyard’),” *The Aviationist*, April 14, 2021, <https://theaviationist.com/2021/04/14/poland-signs-excess-defense-article-deal-procuring-five-extra-c-130hs-resurrected-from-the-boneyard/> (accessed July 3, 2021).
384. Jaroslaw Adamowski, “Polish Defence Ministry Confirms Plan to Buy M1 Abrams Tanks,” *Defense News*, July 14, 2021, <https://www.defensenews.com/land/2021/07/14/polish-defence-ministry-confirms-plan-to-buy-m1-abrams-tanks/> (accessed July 20, 2021).

385. North Atlantic Treaty Organization, Resolute Support Mission, “Resolute Support Mission (RSM): Key Facts and Figures.”
386. Baltic News Service, “Number of NATO Jets Policing Baltic Airspace Back Down to 8,” ERR–Estonian Public Broadcasting, January 2, 2020, <https://news.err.ee/1019567/number-of-nato-jets-policing-baltic-airspace-back-down-to-8> (accessed July 3, 2021).
387. News release, “Poland Takes Charge of NATO High Readiness Force,” North Atlantic Treaty Organization, December 30, 2019, https://www.nato.int/cps/en/natohq/news_172334.htm (accessed July 3, 2021).
388. Map, “NATO Enhanced Forward Presence,” North Atlantic Treaty Organization, valid as of April 7, 2021, https://www.nato.int/nato_static_fl2014/assets/pdf/2021/4/pdf/210407-MAP-eFP-e.pdf (accessed July 3, 2021).
389. North Atlantic Treaty Organization, Kosovo Force (KFOR), “Key Facts and Figures.”
390. “President Extends Polish Military Missions,” *The First News*, December 29, 2020, <https://www.thefirstnews.com/article/president-extends-polish-military-missions-18734> (accessed July 3, 2021).
391. News release, “Poland Joins NATO Assurance Mission for Turkey,” North Atlantic Treaty Organization, April 20, 2021, https://www.nato.int/cps/en/natohq/news_183229.htm (accessed July 3, 2021).
392. “President Extends Polish Military Missions.”
393. Reuters, “Turkey Arrests 150 in Military Probe over Gulen Links: Anadolu,” March 23, 2021, <https://www.reuters.com/article/turkey-security-gulen-int/turkey-arrests-150-in-military-probe-over-gulen-links-anadolu-idUSKBN2BF0NF> (accessed July 10, 2021).
394. Aram Ekin Duran, “Turkey Holds Thousands in Solitary in Erdogan’s Prisons,” *Deutsche Welle*, May 7, 2019, <https://www.dw.com/en/turkey-holds-thousands-in-solitary-in-erdogans-prisons/a-48640213> (accessed June 5, 2021).
395. Al Jazeera, “Turkey Orders 532 Arrests over Fethullah Gulen Links,” April 26, 2021, <https://www.aljazeera.com/news/2021/4/26/turkey-orders-532-arrests-in-military-probe-over-gulen-links> (accessed July 3, 2021).
396. International Institute for Strategic Studies, *The Military Balance 2020*, p. 82.
397. Al Jazeera, “Turkey Arrests 10 Retired Admirals over Government Criticism,” April 5, 2021, <https://www.aljazeera.com/news/2021/4/5/turkey-issues-arrest-warrants-over-retired-admirals-open-letter> (accessed July 3, 2021).
398. Michael Peck, “Bad Idea: In 2016, Turkey Destroyed Its Own Air Force,” *The National Interest*, The Reboot Blog, March 18, 2021, <https://nationalinterest.org/blog/reboot/bad-idea-2016-turkey-destroyed-its-own-air-force-180427#:~:text=Yet%20in%20the%20name%20of,%20President%20Recep%20Tayyip%20Erdogan> (accessed July 3, 2021).
399. Abdullah Bozkurt, “Turkish Air Force Crippled After Mass Purge of Pilots by Erdoğan Government,” *Nordic Monitor*, January 13, 2020, <https://www.nordicmonitor.com/2020/01/the-turkish-air-force-crippled-after-mass-purge-of-pilots-by-erdogan-government/> (accessed July 3, 2021).
400. Michael Peck, “Turkey: How One Country Destroyed Their Own Air Force,” *The National Interest*, January 2, 2020, <https://nationalinterest.org/blog/buzz/turkey-how-one-country-destroyed-their-own-air-force-110581> (accessed July 3, 2021).
401. Bozkurt, “Turkish Air Force Crippled After Mass Purge of Pilots by Erdoğan Government.”
402. Peck, “Bad Idea: In 2016, Turkey Destroyed Its Own Air Force.”
403. Reuters, “Turkey Says Russian S-400 Missile Delivery Brought Forward to July 2019,” April 4, 2018, <https://www.reuters.com/article/us-russia-turkey-missiles/turkey-says-russian-s-400-missile-delivery-brought-forward-to-july-2019-idUSKCN1HB0IU> (accessed June 5, 2021), and Reuters, “Russia to Start Deliveries of S-400 to Turkey in July: Ifax,” April 24, 2019, <https://www.reuters.com/article/us-turkey-security-russia-idUSKCN1S01H5> (accessed June 5, 2021).
404. International Institute for Strategic Studies, *The Military Balance 2020*, p. 82.
405. Anthony Capaccio, “U.S. Suspends Turkey’s Role in F-35 over Russian Missile System,” *Bloomberg*, July 17, 2019, <https://www.bloomberg.com/news/articles/2019-07-17/white-house-says-turkey-s-role-in-f-35-program-now-impossible> (accessed July 3, 2021).
406. Burak Ege Bekdil, “Turkey Transports S-400 Air Defense System for Black Sea Tests,” *Defense News*, October 9, 2020, <https://www.defensenews.com/training-sim/2020/10/09/turkey-transport-s-400-air-defense-system-for-black-sea-tests/> (accessed July 3, 2021).
407. Amanda Macias, “U.S. Sanctions Turkey over Purchase of Russian S-400 Missile System,” *CNBC*, updated December 15, 2020, <https://www.cnbc.com/2020/12/14/us-sanctions-turkey-over-russian-s400.html> (accessed July 3, 2021).
408. Alec Mally, “US Sanctions for Turkey’s S-400 Procurement Come into Effect,” *New Europe*, April 8, 2021, <https://www.neweurope.eu/article/us-sanctions-for-turkeys-s-400-procurement-come-into-effect/> (accessed July 3, 2021).
409. Thomas Newdick, “Turkish F-16 Knocks Down Target Drone with New Indigenous Air-to-Air Missile,” *The War Zone*, April 15, 2021, <https://www.thedrive.com/the-war-zone/40193/turkish-f-16-knocks-down-target-drone-with-new-indigenous-air-to-air-missile> (accessed July 3, 2021).

410. David Welna, "U.S.-Turkey Standoff over F-35 Escalates as Each Side Waits for the Other to Blink," NPR, April 3, 2019, <https://www.npr.org/2019/04/03/709222963/u-s-turkey-standoff-over-f-35-escalates-as-each-side-waits-for-the-other-to-blink> (accessed July 3, 2021), and Burak Ege Bekdil, "How Turkey's Industry Could Suffer from the S-400 Deal with Russia," *Defense News*, April 11, 2019, <https://www.defensenews.com/industry/2019/04/11/how-turkeys-industry-could-suffer-from-the-s-400-deal-with-russia/> (accessed July 3, 2021).
411. According to the GAO, "the F-35 program office and the prime contractors have identified and are contracting with alternative suppliers to produce the 1,005 parts that are currently made in Turkey." U.S. Government Accountability Office, *F-35 Joint Strike Fighter: DOD Needs to Update Modernization Schedule and Improve Data on Software Development*, GAO-21-226, March 2021, p. 5, <https://www.gao.gov/assets/gao-21-226.pdf> (accessed July 3, 2021).
412. Valerie Insinna, "Turkey's Removal from F-35 Program to Cause Hike in Engine Price," *Defense News*, April 23, 2021, <https://www.defensenews.com/air/2021/04/23/turkeys-removal-from-f-35-program-to-cause-hike-in-engine-price/> (accessed July 3, 2021).
413. General Tod D. Wolters, United States Air Force, Commander, United States European Command, statement before the Committee on Armed Services, U.S. Senate, April 13, 2021, p. 6, <https://www.armed-services.senate.gov/imo/media/doc/CLEARED%20USEUCOM%20SASC%20Congressional%20Posture%20Statement.pdf> (accessed June 5, 2021).
414. David Axe, "Turkey Is the Middle East's Newest Drone Super Power," *The National Interest*, The Buzz Blog, April 9, 2020, <https://nationalinterest.org/blog/buzz/turkey-middle-east-s-newest-drone-super-power-142242> (accessed June 5, 2021).
415. Jim Zanotti and Clayton Thomas, "Turkey: Background and U.S. Relations," Congressional Research Service *Report for Members and Committees of Congress* No. R41368, updated November 9, 2020, p. 29, <https://fas.org/sgp/crs/mideast/R41368.pdf> (accessed June 5, 2021).
416. BBC News, "Syria War: Russia and Turkey Agree Idlib Ceasefire," March 5, 2020, <https://www.bbc.com/news/world-middle-east-51747592> (accessed July 3, 2021).
417. Middle East Monitor, "Turkey, Russia and Iran Agree to Extend Ceasefire in Idlib," February 18, 2021, <https://www.middleeastmonitor.com/20210218-turkey-russia-and-iran-agree-to-extend-ceasefire-in-idlib/> (accessed July 3, 2021).
418. Patrick Chevallereau, "The Worm Is in the Fruit: A Rising Strategic Foe Inside NATO," RUSI [Royal United Services Institute] *Europe Commentary*, July 31, 2020, <https://rusieurope.eu/commentary/worm-fruit-rising-strategic-foe-inside-nato> (accessed July 3, 2021).
419. "Turkey Plans to Establish Naval Base in Cyprus," *Daily Sabah*, December 25, 2019, <https://www.dailysabah.com/politics/2019/12/25/turkey-plans-to-establish-naval-base-in-cyprus> (accessed July 3, 2021).
420. Reuters, "Turkish Drones Escorting Drill Ships to Fly from Turkish Cypriot Airport: Report," December 13, 2019, <https://www.reuters.com/article/us-turkey-defence-cyprus/turkish-drones-escorting-drill-ships-to-fly-from-turkish-cypriot-airport-report-idUSKBN1YH2DZ> (accessed June 5, 2021).
421. Dorian Jones, "US Military Base in Turkey Has Uncertain Future," Voice of America, November 26, 2019, <https://www.voanews.com/europe/us-military-base-turkey-has-uncertain-future> (accessed July 3, 2021).
422. Vandiver, "US Reviewing Plans to Move Nuclear Weapons from Incirlik, Report Says."
423. Jeff Seldin, "US General Sees Hope for Ties with Turkey," Voice of America, December 10, 2019, <https://www.voanews.com/usa/us-general-sees-hope-ties-turkey> (accessed July 3, 2021).
424. North Atlantic Treaty Organization, Airborne Warning and Control Force, "Current Operations," <https://awacs.nato.int/operations/current-operations> (accessed July 3, 2021).
425. Zanotti and Thomas, "Turkey: Background and U.S. Relations," p. 28.
426. Infographic, "NATO Ballistic Missile Defence Architecture as of 2019," North Atlantic Treaty Organization, https://www.nato.int/nato_static_f12014/assets/pictures/2016_07_160711a-infographics-bmd/20170907_170907-bmd03.jpg (accessed July 3, 2021), and Trevithick, "The U.S. Army Wants to Expand a Secretive Missile Defense Site in Turkey."
427. News release, "Turkey Takes Charge of NATO High Readiness Force," North Atlantic Treaty Organization, last updated December 30, 2020, https://www.nato.int/cps/en/natohq/news_180627.htm (accessed July 3, 2021).
428. North Atlantic Treaty Organization, Resolute Support Mission, "Resolute Support Mission (RSM): Key Facts and Figures."
429. North Atlantic Treaty Organization, Kosovo Force (KFOR), "Key Facts and Figures."
430. North Atlantic Treaty Organization, "Standing NATO Mine Countermeasures Group Two (SNMCMG2)."
431. North Atlantic Treaty Organization, "Standing NATO Maritime Group Two (SNMG2)," <https://mc.nato.int/snmg2> (accessed July 11, 2021).
432. International Institute for Strategic Studies, *The Military Balance 2021*, p. 152.

433. International Institute for Strategic Studies, *The Military Balance 2020*, p. 81.
434. Burak Ege Bekdil, "Turkey's Erdogan Decrees Sweeping Defense Procurement Takeover," *Defense News*, December 27, 2017, <https://www.defensenews.com/industry/2017/12/27/turkeys-erdogan-decrees-sweeping-defense-procurement-takeover/> (accessed July 3, 2021).
435. Burak Ege Bekdil, "Turkish 'Brain Drain': Why Are Defense Industry Officials Ditching Their Jobs in Turkey for Work Abroad?" *Defense News*, January 8, 2019, <https://www.defensenews.com/industry/2019/01/08/turkish-brain-drain-why-are-defense-industry-officials-ditching-their-jobs-in-turkey-for-work-abroad/> (accessed July 3, 2021).
436. Burak Ege Bekdil, "Turkey in Talks with South Korea to Salvage Altay Tank Program," *Defense News*, November 19, 2020, <https://www.defensenews.com/industry/2020/11/19/turkey-in-talks-with-south-korea-to-salvage-altay-tank-program/> (accessed July 3, 2021); "Turkey to Test Indigenous Engine for Main Battle Tank Altay in April," *Daily Sabah*, March 29, 2021, <https://www.dailysabah.com/business/defense/turkey-to-test-indigenous-engine-for-main-battle-tank-altay-in-april> (accessed July 3, 2021), and "Turkey's Altay Tank, ATAK Helicopter Held up Due to Engine Non-Availability," *DefenseWorld.net*, January 9, 2020, https://www.defenseworld.net/news/26142/Turkey___s_Altay_Tank__ATAK_Helicopter_Held_up_Due_to_Engine_Non_availability#.XpStV_hKjIU (accessed July 3, 2021).
437. Ibid.
438. Burak Ege Bekdil, Usman Ansari, and Joe Gould, "Pakistan Extends Delayed T129 Helo Deal with Turkey—Again," *Defense News*, March 15, 2021, <https://www.defensenews.com/global/mideast-africa/2021/03/15/pakistan-extends-delayed-t129-helo-deal-with-turkey-again/> (accessed July 3, 2021).
439. StrategyPage, "Procurement: Engine Problems," April 15, 2021, <https://www.strategypage.com/htmw/htproc/20210415.aspx> (accessed July 3, 2021).
440. Sevil Erkuş, "France 'Hampers Eurosam Missile System Due to Political Reasons,'" *Hurriyet Daily News*, January 6, 2020, <https://www.hurriyetdailynews.com/france-hampers-eurosam-missile-system-due-to-political-reasons-150657> (accessed July 20, 2021).
441. Selcan Hacaoglu, Firat Kozok, and Ania Nussbaum, "Turkey Pushes Macron to Allow Purchase of Missile System," *Bloomberg*, September 25, 2020, <https://www.bloomberg.com/news/articles/2020-09-25/turkey-pushes-macron-to-allow-purchase-of-missile-defense-system> (accessed July 3, 2021).
442. Ibid.
443. International Institute for Strategic Studies, *The Military Balance 2016: The Annual Assessment of Global Military Capabilities and Defence Economics* (London: Routledge, 2016), pp. 147–148.
444. Tayfun Ozberk, "Turkey Floats Out Its First AIP Submarine 'Piri Reis,'" *Naval News*, March 25, 2021, <https://www.navalnews.com/naval-news/2021/03/turkey-floats-out-its-first-aip-submarine-piri-reis/> (accessed June 5, 2021).
445. Xavier Vavasseur, "Turkish Industry to Conduct Mid-life Upgrade of Preveze-Class Submarines," *Naval News*, February 10, 2019, <https://www.navalnews.com/naval-news/2019/02/turkish-industry-to-conduct-mid-life-upgrade-of-preveze-class-submarines/?nowprocket=1> (accessed July 3, 2021).
446. "Turkey Launches Test and Evaluation Ship TCG Ufuk," *Naval Today*, February 11, 2019, <https://navaltoday.com/2019/02/11/turkey-launches-test-and-evaluation-ship-tcg-ufuk/> (accessed June 5, 2021), and Can Kasapoglu, "'The Blue Homeland': Turkey's Largest Naval Drill," *Anadolu Agency*, February 27, 2019, <https://www.aa.com.tr/en/analysis/-the-blue-homeland-turkey-s-largest-naval-drill/1404267> (accessed June 5, 2021).
447. Burak Ege Bekdil, "Turkey Reveals Path to Boost Defense and Aerospace Exports by \$10.2B in 2023," *Defense News*, December 10, 2019, <https://www.defensenews.com/industry/2019/12/10/turkey-reveals-path-to-boost-defense-and-aerospace-exports-by-102b-in-2023/> (accessed July 3, 2021).
448. Burak Ege Bekdil, "Turkey Reports 17% Drop in Defense Exports," *Defense News*, January 19, 2021, <https://www.defensenews.com/global/europe/2021/01/19/turkey-reports-nearly-15-drop-in-defense-exports/> (accessed July 3, 2021).
449. Jari Tanner, "US Grants \$169M in Military Aid to Baltic Nations for 2021," *Associated Press*, December 23, 2020, <https://apnews.com/article/estonia-appropriations-defense-appropriations-lithuania-latvia-cl40bdd0cf580826363ec2d0427e0c02> (accessed May 20, 2021).
450. North Atlantic Treaty Organization, *The Secretary General's Annual Report: 2020*, p. 50.
451. ERR—Estonian Public Broadcasting News, "Defense Spending to Rise to €645.4 Million in 2021," September 30, 2020, <https://news.err.ee/1141128/defense-spending-to-rise-to-645-4-million-in-2021> (accessed July 3, 2021).
452. "Foreword," in Estonian Ministry of Defence, *Ministry of Defence Development Plan 2020–2025*, p. 1, https://kaitseministeerium.ee/sites/default/files/Planeeringud/the_ministry_of_defence_development_plan_2022-2025_foreword.pdf (accessed July 3, 2021).

453. Andres Einmann, "Estonia Complements Ammunition Stores," *Postimees*, October 13, 2020, <https://news.postimees.ee/7084764/estonia-complements-ammunition-stores> (accessed July 3, 2021).
454. International Institute for Strategic Studies, *The Military Balance 2021*, p. 98.
455. Simon Newton, "Why NATO's Military Might Is Focused on Estonia," *Forces.net*, May 11, 2015, <https://www.forces.net/news/tri-service/why-natos-military-might-focused-estonia> (accessed July 3, 2021).
456. Republic of Estonia, Ministry of Defence, and Republic of Estonia, Defence Forces, *National Defence Development Plan 2017–2026*, <http://www.kaitseministeerium.ee/riigikaitse2026/arengukava/eng/> (accessed July 3, 2021).
457. ERR–Estonian Public Broadcasting News, "Paper: More Military Equipment to Be Bought from South Korea," October 3, 2019, <https://news.err.ee/987854/paper-more-military-equipment-to-be-bought-from-south-korea> (accessed July 3, 2021).
458. "Estonia Receives First K9 Howitzers from South Korea," *Defense Brief*, October 10, 2020, <https://defbrief.com/2020/10/10/estonia-receives-first-k9-howitzers-from-south-korea/> (accessed July 3, 2021).
459. Press release, "U.S. Delivers Javelin Missiles to Estonia," U.S. Embassy in Estonia, April 2, 2020, <https://ee.usembassy.gov/press-release-u-s-delivers-javelin-missiles-to-estonia/> (accessed July 4, 2021).
460. ERR–Estonian Public Broadcasting News, "Finland and Latvia to Build Armored Vehicles Together," January 10, 2021, <https://news.err.ee/1234201/finland-and-latvia-to-build-armored-vehicles-together> (accessed July 4, 2021).
461. Gareth Jennings, "Estonia Receives First of Two Donated C-145As," *Janes*, March 19, 2019, <https://www.janes.com/defence-news/news-detail/estonia-receives-first-of-two-donated-c-145as> (accessed July 4, 2021).
462. Paul McLeary, "Estonia Inks 'Big' New US Defense Deal, Eyes on Russia," *Breaking Defense*, July 9, 2019, <https://breakingdefense.com/2019/07/estonia-inks-big-us-defense-deal-eyes-on-russia/> (accessed July 4, 2021).
463. ERR–Estonian Public Broadcasting News, "Estonia Hopes to Bring Latvia on Board with Coastal Defense Procurement," March 24, 2021, <https://news.err.ee/1608152992/estonia-hopes-to-bring-latvia-on-board-with-coastal-defense-procurement> (accessed July 3, 2021).
464. Republic of Estonia, Ministry of Defence, and Republic of Estonia, Defence Forces, *National Defence Development Plan 2017–2026*.
465. Monica M. Ruiz, "To Bolster Cybersecurity, the US Should Look to Estonia," *Wired*, February 14, 2020, <https://www.wired.com/story/opinion-to-bolster-cybersecurity-the-us-should-look-to-estonia/> (accessed July 3, 2021).
466. Eric Tucker, "US, Estonia Partnered to Search out Cyber Threat from Russia," *Associated Press*, December 3, 2020, <https://apnews.com/article/hacking-russia-estonia-e931e674091b080f7a01642b01729bbe> (accessed July 3, 2021).
467. News release, "Signing of Defense Cooperation Agreement—Remarks by Ambassador James D. Melville," U.S. Embassy in Estonia, January 17, 2017, <https://ee.usembassy.gov/signing-defense-cooperation-agreement-remarks-ambassador-james-d-melville/> (accessed July 3, 2021).
468. North Atlantic Treaty Organization, Resolute Support Mission, "Resolute Support Mission (RSM): Key Facts and Figures."
469. North Atlantic Treaty Organization, "Standing NATO Mine Countermeasures Group One (SNMCMG1)."
470. Republic of Estonia, Defence Forces, "Operations Abroad," last updated June 28, 2021, <https://mil.ee/en/defence-forces/operations-abroad/#t-barkhane> (accessed July 3, 2021).
471. Baltic News Service, TBT Staff, "Estonian Defmin Meets with Malian leaders," *The Baltic Times*, March 4, 2021, https://www.baltictimes.com/estonian_defmin_meets_with_malian_leaders/ (accessed July 3, 2021).
472. Republic of Estonia, Defence Forces, "Operations Abroad."
473. International Institute for Strategic Studies, *The Military Balance 2021*, p. 120.
474. *Ibid.*, p. 150.
475. North Atlantic Treaty Organization, Resolute Support Mission, "Resolute Support Mission (RSM): Key Facts and Figures."
476. LETA [Latvian Information Agency], "Government Supports Extension of Participation of Latvian Soldiers in Military Operation in Iraq," January 14, 2020, <https://www.leta.lv/eng/home/important/A3C2ACBB-F186-4540-BC0E-45E6658DD9AA/> (accessed July 3, 2021).
477. News release, "Turkey Takes Charge of NATO High Readiness Force."
478. Republic of Latvia, Ministry of Defence, "Saeima Approves the National Defence Concept," September 28, 2020, <https://www.mod.gov.lv/en/news/saeima-approves-national-defence-concept#:~:text=National%20Guard%20are%20indispensable%20to,long%2Dterm%20protection%20of%20Latvia> (accessed July 3, 2021).

479. Viktors Domburs, "Latvia: Armed to the Teeth," *The Independent*, December 8, 2019, <https://www.theindependentbd.com/arcprint/details/226969/2019-12-08> (accessed July 4, 2021), and Republic of Latvia, Ministry of Defence, "Latvia Plans to Invest the Average of €50 Million a Year in the Development of Military Infrastructure over the Next Four Years," February 26, 2019, <https://www.mod.gov.lv/en/news/latvia-plans-invest-average-eu50-million-year-development-military-infrastructure-over-next> (accessed July 3, 2021).
480. North Atlantic Treaty Organization, *The Secretary General's Annual Report: 2020*, p. 50.
481. Table, "Foreign Military Sales," in U.S. Department of Defense, unclassified *Select Acquisition Report (SAR): UH-60M Black Hawk Helicopter (UH-60M Black Hawk) as of FY 2020 President's Budget*, December 2018 SAR, April 16, 2019, p. 27, https://www.esd.whs.mil/Portals/54/Documents/FOID/Reading%20Room/Selected_Acquisition_Reports/FY_2018_SARS/19-F-1098_DOC_83_UH-60M_Black_Hawk_SAR_Dec_2018.pdf (accessed July 20, 2021).
482. Military Leak, "Latvian National Armed Forces Takes Delivery of New Spike Precision-Guided Tactical Missiles," February 24, 2020, <https://www.janes.com/article/94439/latvia-takes-delivery-of-new-spike-missile-variants> (accessed July 3, 2021).
483. "Latvia Installs Team Trainer for Spike Missiles," *Army Technology*, October 9, 2020, <https://www.army-technology.com/news/latvia-team-trainer-spike-missiles/> (accessed July 3, 2021).
484. ERR–Estonian Public Broadcasting News, "Finland and Latvia to Build Armored Vehicles Together."
485. International Institute for Strategic Studies, *The Military Balance 2021*, p. 122.
486. LRT [Lithuanian National Television and Radio], "Lithuania Lowers Conscription Age," December 12, 2019, <https://www.lrt.lt/en/news-in-english/19/1124775/lithuania-lowers-conscription-age#:~:text=Young%20men%20between%2018%20and,called%20up%20for%20military%20service> (accessed July 3, 2021).
487. North Atlantic Treaty Organization, *The Secretary General's Annual Report: 2020*, p. 50.
488. Sebastian Sprenger, "Lithuania Is First Baltic Nation to Sign US Defense-Cooperation Pact," *Defense News*, April 3, 2019, <https://www.defensenews.com/global/europe/2019/04/03/lithuania-is-first-baltic-nation-to-sign-us-defense-cooperation-pact/> (accessed July 3, 2021).
489. News release, "U.S., Lithuania Detail Roadmap for Cooperation Through 2024," U.S. Department of Defense, April 2, 2019, <https://www.defense.gov/Explore/News/Article/Article/1803578/us-lithuania-detail-roadmap-for-cooperation-through-2024/> (accessed July 11, 2021).
490. International Institute for Strategic Studies, *The Military Balance 2021*, p. 122.
491. Jaroslaw Adamowski, "Lithuania Signs Deal for Its First American Military Helicopters," *Defense News*, November 13, 2020, <https://www.defensenews.com/global/europe/2020/11/13/lithuania-signs-deal-for-its-first-american-military-helicopters/> (accessed July 3, 2021).
492. Ibid.
493. Press release, "NASAMS Medium-Range Air Defence System Officially Handed Over to the Lithuanian Armed Forces," Republic of Lithuania, Ministry of National Defence, October 30, 2020, <https://www.defense-aerospace.com/articles-view/release/3/214069/lithuania-takes-delivery-of-nasams-air-defense-system.html> (accessed June 5, 2021), and "Lithuania to Buy Additional NASAMS Air Defence Missiles from Norway," *Air Force Technology*, January 4, 2019, <https://www.airforce-technology.com/news/lithuania-nasams-defence-missiles-norway/> (accessed July 2, 2021).
494. Shephard News, "Lithuania Orders More Javelins," January 5, 2021, <https://www.shephardmedia.com/news/landwarfareintl/lithuania-orders-more-javelins/> (accessed July 2, 2021).
495. "Lithuania Will Procure 200 US JLTV Joint Light Tactical Vehicles from Oshkosh Defense," *Army Recognition*, November 24, 2019, https://www.armyrecognition.com/november_2019_global_defense_security_army_news_industry/lithuania_will_procure_200_us_jltv_joint_light_tactical_vehicles_from_oshkosh_defense.html (accessed July 3, 2021).
496. Table, "Number of Military and DoD Appropriated Fund (APF) Civilian Personnel Permanently Assigned by Duty Location and Service/Component as of March 31, 2021," in U.S. Department of Defense, Defense Manpower Data Center, "Military and Civilian Personnel by Service/Agency by State/Country (Updated Quarterly)," March 2021, <https://dwp.dmdc.osd.mil/dwp/app/dod-data-reports/workforce-reports> (accessed July 3, 2021).
497. General Curtis M. Scaparrotti, United States Army, Commander, United States European Command, statement on USEUCOM posture before the Committee on Armed Services, U.S. Senate, March 5, 2019, p. 15, https://www.armed-services.senate.gov/imo/media/doc/Scaparrotti_03-05-19.pdf (accessed July 3, 2021), and Commander, U.S. Fleet Forces Command Public Affairs, "Truman Strike Group Returns Home from Eight-Month Deployment," *Military News*, January 7, 2019, https://www.militarynews.com/news/truman-strike-group-returns-home-from-eight-month-deployment/article_5d7f548c-129f-11e9-84ed-3fd3730fb53e.html (accessed June 5, 2021).

498. General Tod D. Wolters, United States Air Force, Commander, United States European Command, statement before the Committee on Armed Services, U.S. Senate, February 25, 2020, p. 13, https://www.armed-services.senate.gov/imo/media/doc/Wolters_02-25-20.pdf (accessed June 5, 2021).
499. U.S. Army, “U.S. Army Europe and Africa Commands Consolidate,” November 20, 2020, https://www.army.mil/article/241094/u_s_army_europe_and_africa_commands_consolidate (accessed June 5, 2021), and Corey Dickstein, “Army Merges Europe, Africa Commands Under a Single 4-Star Headquarters,” *Stars and Stripes*, November 20, 2020, <https://www.stripes.com/news/europe/army-merges-europe-africa-commands-under-a-single-4-star-headquarters-1.652902> (accessed June 5, 2021).
500. U.S. Army, “U.S. Army Europe and Africa Commands Consolidate.”
501. U.S. Army Europe and Africa, “Fact Sheet: U.S. Army Europe and Africa,” as of March 8, 2021, <https://www.europeafrica.army.mil/Portals/19/documents/Infographics/USAREURAF%20Fact%20Sheet%2003082021.pdf?ver=2RoIT5wSRaHhBRpUz26yvw%3D%3D> (accessed July 20, 2021).
502. Ibid.
503. Kinsey Lindstrom, “Rockets Return to Europe,” U.S. Army, January 10, 2020, https://www.army.mil/article/231553/rockets_return_to_europe (accessed July 3, 2021).
504. Ibid.
505. William Morris, “Europe Missile Defense Command Upgraded as Army Announces Leadership Moves,” *Stars and Stripes*, April 17, 2019, <https://www.stripes.com/news/europe/europe-missile-defense-command-upgraded-as-army-announces-leadership-moves-1.577276> (accessed July 3, 2021).
506. John Vandiver, “Ansbach-Based Army Unit First to Get New Mobile Air Defense System,” *Stars and Stripes*, April 26, 2021, <https://www.stripes.com/news/europe/ansbach-based-army-unit-first-to-get-new-mobile-air-defense-system-1.671189> (accessed June 17, 2021).
507. John Vandiver, “‘We Got Zero Notice’: Army Resumes Cold War-Era Snap Deployments to Europe,” *Stars and Stripes*, March 29, 2019, <https://www.stripes.com/news/we-got-zero-notice-army-resumes-cold-war-era-snap-deployments-to-europe-1.574788> (accessed June 17, 2021).
508. U.S. Army Europe and Africa, “Fact Sheet: U.S. Army Europe and Africa,” as of March 8, 2021.
509. U.S. Air Forces Europe & Air Forces Africa, “USAFE–AFAFRICA,” <https://www.usafe.af.mil/About-Us/Mission-and-Organization/> (accessed July 3, 2021).
510. Fact sheet, “U.S. Air Forces in Europe–Air Forces Africa,” U.S. Air Forces in Europe & Air Forces Africa, July 16, 2015, <https://www.af.mil/About-Us/Fact-Sheets/Display/Article/609838/united-states-air-force-in-europe/> (accessed July 3, 2021).
511. Radio Free Europe/Radio Liberty, “Germany Arrests Four Tajik Nationals Suspected of Plotting Terrorist Attack,” April 15, 2020, <https://www.rferl.org/a/germany-arrests-four-tajik-nationals-suspected-of-plotting-terrorist-attack/30555712.html> (accessed July 3, 2021).
512. Brian W. Everstine, “B-1s, B-2s Wrap up European Bomber Task Force Deployment,” *Air Force Magazine*, <https://www.airforcemag.com/b-1s-b-2s-wrap-up-european-bomber-task-force-deployment/> (accessed June 17, 2021).
513. U.S. Air Force, U.S. Air Forces Europe and Air Forces Africa, “U.S. Air Force B-2s Return to Europe,” Air Force Global Strike Command, March 10, 2020, <https://www.afgsc.af.mil/News/Article-Display/Article/2106854/us-air-force-b-2s-return-to-europe/> (accessed June 5, 2021).
514. U.S. Marine Corps, U.S. Marine Forces Europe and Africa, “About: History,” <https://www.marforeur.marines.mil/About/History/> (accessed June 5, 2021).
515. Hope Hodge Seck, “Marines May Move Even More Combat Gear into Norwegian Caves,” *Military.com*, DefenseTech Blog, June 28, 2017, <https://www.defensetech.org/2017/06/16/marines-combat-gear-norwegian-caves/> (accessed July 11, 2021).
516. Gunnery Sgt. Jason Fudge, “Marines, Sailors Build Bridge in Norway During Exercise Trident Juncture 18,” U.S. Marine Corps, November 3, 2018, <https://www.marines.mil/News/News-Display/Article/1681732/marines-sailors-build-bridge-in-norway-during-exercise-trident-juncture-18/> (accessed June 5, 2021).
517. Michael T. Klare, “US Troops Are Heading North to Train on What Could Be the Next World War Battlefield,” *Business Insider*, February 24, 2020, <https://www.businessinsider.com/us-troops-heading-north-for-cold-response-2020-arctic-exercise-2020-2> (accessed June 5, 2021).
518. U.S. Marine Corps, “Mission: MARFOREUR/AF Mission,” <https://www.marforeur.marines.mil/About/Command-Information/> (accessed June 17, 2021).

519. Todd South, "Marines Run Long-Range Insertion, Urban Attack with Portuguese in 'Wild Crocodile II,'" *Marine Corps Times*, January 13, 2020, <https://www.marinecorpstimes.com/news/your-marine-corps/2020/01/13/marines-wild-crocodile-ii-runs-long-range-insertion-urban-attack-with-portuguese/> (accessed June 17, 2021), and Matthew Cox, "6 Years After Benghazi, a Marine Commander Says Conditions May Soon Allow a US Diplomatic Return to Libya," *Business Insider*, December 17, 2018, <https://www.businessinsider.com/conditions-improving-for-us-diplomatic-return-to-libya-2018-12> (accessed June 17, 2021).
520. Martin Egnash, "Legacy of Benghazi: Marine Force Stays Ready for Quick Africa Deployment," *Stars and Stripes*, January 14, 2019, <https://www.stripes.com/news/legacy-of-benghazi-marine-force-stays-ready-for-quick-africa-deployment-1.564342> (accessed June 17, 2021).
521. John Vandiver, "Special Forces, SEAL Units to Join Mix of Elite Troops at Rural Baumholder," *Stars and Stripes*, June 13, 2018, <https://www.stripes.com/news/special-forces-seal-units-to-join-mix-of-elite-troops-at-rural-baumholder-1.532491> (accessed June 17, 2021).
522. John Vandiver, "New US Special Operations Site Activated in Heart of the Baltics," *Stars and Stripes*, December 3, 2020, <https://www.stripes.com/news/europe/new-us-special-operations-site-activated-in-heart-of-the-baltics-1.654032> (accessed June 17, 2021).
523. Wolters, statement before Senate Armed Services Committee, April 13, 2021, p. 17.
524. U.S. Department of Defense, Office of the Under Secretary of Defense (Comptroller), *Department of Defense Budget Fiscal Year (FY) 2021: European Deterrence Initiative*, pp. 22–40.
525. Dan Stoutamire, "Romanian Air Base Proving Crucial as US Hub Ahead of Major Exercises," *Stars and Stripes*, April 18, 2017, <https://www.stripes.com/news/romanian-air-base-proving-crucial-as-us-hub-ahead-of-major-exercises-1.464105#.WPZirORlrcs> (accessed June 17, 2021).

Middle East

Nicole Robinson

Strategically situated at the intersection of Europe, Asia, and Africa, the Middle East has long been an important focus of United States foreign policy. U.S. security relationships in the region are built on pragmatism, shared security concerns, and economic interests, including large sales of U.S. arms to countries in the region to help them defend themselves. The U.S. also has a long-term interest in the Middle East that derives from the region's economic importance as the world's primary source of oil and gas.

The region is home to a wide array of cultures, religions, and ethnic groups, including Arabs, Jews, Kurds, Persians, and Turks, among others. It also is home to the three Abrahamic religions of Judaism, Christianity, and Islam as well as many smaller religions like the Bahá'í, Druze, Yazidi, and Zoroastrian faiths. The region contains many predominantly Muslim countries as well as the world's only Jewish state.

The Middle East is deeply sectarian, and these long-standing divisions, exacerbated by the constant vying for power among religious extremists, are central to many of the region's current challenges. In some cases, these sectarian divides have persisted for centuries. Contemporary conflicts, however, have less to do with these histories than they do with modern extremist ideologies and the fact that today's borders often do not reflect cultural, ethnic, or religious realities. Instead, they are often the results of decisions taken by the British, French, and other powers during and

soon after World War I as they dismantled the Ottoman Empire.¹

In a way not understood by many in the West, religion remains a prominent fact of daily life in the modern Middle East. At the heart of many of the region's conflicts is the friction within Islam between Sunnis and Shias. This friction dates back to the death of the Prophet Muhammad in 632 AD.² Sunni Muslims, who form the majority of the world's Muslim population, hold power in most of the region's Arab countries.

Viewing the Middle East's current instability through the lens of a Sunni-Shia conflict, however, does not show the full picture. The cultural and historical division between Arabs and Persians has reinforced the Sunni-Shia split. The mutual distrust between many Sunni Arab powers and Iran, the Persian Shia power, compounded by clashing national and ideological interests, has fueled instability in such countries as Iraq, Lebanon, Syria, and Yemen. The COVID-19 coronavirus exposed Sunni-Shia tensions when Sunni countries in the region blamed "Shia backwardness," likely referencing the lack of religious shrines, as the reason for the rapid spread of the virus in Iran.³ Sunni extremist organizations like al-Qaeda and the Islamic State (IS) have exploited sectarian and ethnic tensions to gain support by posing as champions of Sunni Arabs against Syria's Alawite-dominated regime and other non-Sunni governments and movements.

Regional demographic trends also are destabilizing factors. The Middle East contains one

of the world's youngest and fastest-growing populations. In most of the West, this would be viewed as an advantage, but not in the Middle East. Known as "youth bulges," these demographic tsunamis have overwhelmed many countries' inadequate political, economic, and educational infrastructures, and the lack of access to education, jobs, and meaningful political participation fuels discontent. Because almost two-thirds of the region's inhabitants are less than 30 years old, this demographic bulge will continue to have a substantial effect on political stability across the region.⁴

The Middle East contains more than half of the world's oil reserves and is the world's chief oil-exporting region.⁵ As the world's largest producer and consumer of oil,⁶ the U.S., even though it actually imports relatively little of its oil from the Middle East, has a vested interest in maintaining the free flow of oil and gas from the region. Oil is a fungible commodity, and the U.S. economy remains vulnerable to sudden spikes in world oil prices.

During the COVID-19 crisis, oil prices plunged to below zero in April 2020 after stay-at-home orders caused a severe imbalance between supply and demand. This unprecedented drop in demand sparked an oil price war between Saudi Arabia and Russia. U.S. oil producers were forced to cut back production, and "[i]f prices don't regain stability, analysts' biggest fear is that the U.S. energy sector won't be able to bounce back."⁷ Although oil exporters Russia and Saudi Arabia eventually agreed to reduce production by 12 percent, the plummet in oil prices over 2020 caused significant shocks for exporters and importers. Saudi Arabia's economy—the largest in the region—shrank by 4.1 percent in 2020, with a 3.3 percent decline in oil output during the first quarter alone.⁸ This decline in oil production will cause long-term damage to importers who now face reduced foreign investment, remittances, tourism, and grants from exporters.⁹

Because many U.S. allies depend on Middle East oil and gas, there is also a second-order effect for the U.S. if supply from the Middle East is reduced or compromised. For example,

Japan is both the world's third-largest economy and largest importer of liquefied natural gas (LNG).¹⁰ The U.S. itself might not be dependent on Middle East oil or LNG, but the economic consequences arising from a major disruption of supplies would ripple across the globe.

Financial and logistics hubs are also growing along some of the world's busiest transcontinental trade routes. One of the region's economic bright spots in terms of trade and commerce is in the Persian Gulf. The emirates of Dubai and Abu Dhabi in the United Arab Emirates (UAE), along with Qatar, are competing to become the region's top financial center.

The economic situation in the Middle East is part of what drives the political environment. The lack of economic freedom was an important factor leading to the Arab Spring uprisings, which began in early 2011 and disrupted economic activity, depressed foreign and domestic investment, and slowed economic growth.

The COVID-19 pandemic has had massive repercussions for the entire region, affecting economies and shaking political systems in the aftermath of the crisis. Over 2020, the regional economy experienced a 5 percent decline in GDP growth, with declines across the region fluctuating between 2 percent (Qatar) and almost 20 percent (Lebanon).¹¹ Recovery will likely take years, exacerbating tensions already present in many Middle East countries. For example, the pandemic has already added to Lebanon's political instability, fueling conflict between rival political factions competing to secure scarce medical resources for their supporters and aggravating tensions between Lebanese citizens and desperate refugees who have flooded in from neighboring Syria.¹²

The political environment has a direct bearing on how easily the U.S. military can operate in a region. In many Middle Eastern countries, the political situation remains fraught with uncertainty. The Arab Spring uprisings (2010–2012) formed a sandstorm that eroded the foundations of many authoritarian regimes, erased borders, and destabilized many of the region's countries,¹³ but the popular uprisings in Tunisia, Libya, Egypt, Bahrain, Syria, and

Yemen did not usher in a new era of democracy and liberal rule as many in the West were hoping. At best, they made slow progress toward democratic reform; at worst, they added to political instability, exacerbated economic problems, and contributed to the rise of Islamist extremists.

Today, the region's economic and political outlooks remain bleak. In some cases, self-interested elites have prioritized regime survival over real investment in human capital, aggravating the material deprivation of youth as unresolved issues of endemic corruption, high unemployment, and the rising cost of living have worsened. In response to this lack of progress, large-scale protests reemerged in 2019 in Lebanon, Iraq, Egypt, Sudan, Algeria, and other countries.¹⁴ Despite COVID-19 lockdowns and curfews, protests also resumed in Lebanon and Iraq in 2021.¹⁵ The protests in Lebanon and Iraq could even affect the operational environment for U.S. forces in the region.¹⁶

There is no shortage of security challenges for the U.S. and its allies in this region. Using the breathing space and funding afforded by the July 14, 2015, Joint Comprehensive Plan of Action (JCPOA),¹⁷ for example, Iran has exploited Shia–Sunni tensions to increase its influence on embattled regimes and has undermined adversaries in Sunni-led states. In May 2018, the Trump Administration left the JCPOA after European allies failed to address many of its serious flaws including its sunset clauses.¹⁸ A year later, in May 2019, Iran announced that it was withdrawing from certain aspects of the JCPOA.¹⁹ U.S. economic sanctions have been crippling Iran's economy as part of the former Trump Administration's "Maximum Pressure Campaign." The sanctions are meant to force changes in Iran's behavior, particularly with regard to its support for terrorist organizations and refusal to renounce a nascent nuclear weapons program.²⁰

While many of America's European allies publicly denounced the Trump Administration's decision to withdraw from the JCPOA, most officials agree privately that the agreement is flawed and needs to be fixed. America's

allies in the Middle East, including Israel and most Gulf Arab states, supported the U.S. decision and welcomed a harder line against the Iranian regime.²¹ With the arrival of the Biden Administration in 2021, Iran has been mounting its own maximum-pressure campaign to force President Joseph Biden to lift sanctions and unconditionally return to the 2015 agreement. Indirect talks brokered by the European Union have been ongoing between U.S. and Iranian diplomats in Vienna since April 2021, but as of the time this study was being prepared, a deal had not been reached.²²

Tehran attempts to run an unconventional empire by exerting great influence on sub-state entities like Hamas (the Palestinian territories); Hezbollah (Lebanon); the Mahdi movement (Iraq); and the Houthi insurgents (Yemen). The Iranian Quds Force, the special-operations wing of Iran's Islamic Revolutionary Guard Corps, have orchestrated the formation, arming, training, and operations of these sub-state entities as well as other surrogate militias. These Iran-backed militias have carried out terrorist campaigns against U.S. forces and allies in the region for many years. On January 2, 2020, President Donald Trump ordered an air strike that killed General Qassem Suleimani, leader of the Iranian Quds Force, and Abu Mahdi al-Muhandis, leader of the Iraqi Shia paramilitary group, both of whom had been responsible for carrying out attacks against U.S. personnel in Iraq. Suleimani's and Muhandis's deaths were a huge loss for Iran's regime and its Iraqi proxies. They also were a major operational and psychological victory for the United States.²³

In Afghanistan, Tehran's influence on some Shiite groups is such that thousands have volunteered to fight for Bashar al-Assad in Syria.²⁴ Iran also provided arms to the Taliban after it was ousted from power by a U.S.-led coalition²⁵ and has long considered the Afghan city of Herat near the Afghan–Iranian border to be within its sphere of influence.

Iran already looms large over its weak and divided Arab rivals. Iraq and Syria have been destabilized by insurgencies and civil war and

may never fully recover; Egypt is distracted by its own internal problems, economic imbalances, and the Islamist extremist insurgency in the Sinai Peninsula; and Jordan has been inundated by a flood of Syrian refugees and is threatened by the spillover of Islamist extremist groups from Syria.²⁶ Meanwhile, Tehran has continued to build up its missile arsenal, now the largest in the Middle East; has intervened to prop up the Assad regime in Syria; and supports Shiite Islamist revolutionaries in Yemen and Bahrain.²⁷

In Syria, the Assad regime's brutal repression of peaceful demonstrations early in 2011 ignited a fierce civil war that killed more than half a million people and created a major humanitarian crisis: according to the United Nations High Commissioner for Refugees, "13.4 million people in need of humanitarian and protection assistance in Syria"; "6.6 million Syrian refugees worldwide, of whom 5.6 million [are] hosted in countries near Syria" like Turkey, Lebanon, and Jordan; and "6.7 million internally displaced persons" within Syria.²⁸ The large refugee populations created by this civil war could become a source of recruits for extremist groups. For example, both the Islamist Hay'at Tahrir al-Sham, formerly known as the al-Qaeda-affiliated Jabhat Fateh al-Sham and before that as the al-Nusra Front, and the self-styled Islamic State (IS), formerly known as ISIS or ISIL and before that as al-Qaeda in Iraq, used the power vacuum created by the war to carve out extensive sanctuaries where they built proto-states and trained militants from a wide variety of other Arab countries, Central Asia, Russia, Europe, Australia, and the United States.²⁹

At the height of its power, with a sophisticated Internet and social media presence and by capitalizing on the civil war in Syria and sectarian divisions in Iraq, the IS was able to recruit over 25,000 fighters from outside the region to join its ranks in Iraq and Syria. These foreign fighters included thousands from Western countries, including the United States. In 2014, the U.S. announced the formation of a broad international coalition to defeat the Islamic

State. Early in 2019, the territorial "caliphate" had been destroyed by a U.S.-led coalition of international partners.

Arab-Israeli tensions are another source of instability in the region. The repeated breakdown of Israeli-Palestinian peace negotiations has created an even more antagonistic situation. Hamas, the Palestinian branch of the Muslim Brotherhood that has controlled Gaza since 2007, seeks to transform the conflict from a national struggle over sovereignty and territory into a religious conflict in which compromise is denounced as blasphemy. Hamas invokes jihad in its struggle against Israel and seeks to destroy the Jewish state and replace it with an Islamic state.

At the end of 2020, the signing of the Abraham Accords caused a brief spark of hope. These U.S.-brokered agreements normalizing relations between Israel and the UAE and between Israel and Bahrain are important milestones in the diplomatic march toward a broader Arab-Israeli peace.³⁰ However, in May 2021, a real estate dispute in the East Jerusalem neighborhood of Sheikh Jarrah escalated into active conflict between Israel and Hamas. Violent riots intensified in the city of Jerusalem, and Hamas threatened to attack if Israel did not withdraw its police by the evening of May 10. When Israel ignored this ultimatum, Hamas unleashed a barrage of almost 4,300 rockets at Jerusalem and southern Israel according to the Israeli military. Israel's Iron Dome air defense system was able to stop most of these rockets. Following 11 days of fighting, a cease-fire brokered by Egypt was reached between Hamas and Israel. At least 243 people were killed in Gaza, and 12 people were killed in Israel.³¹

Important Alliances and Bilateral Relations in the Middle East

The U.S. has strong military, security, intelligence, and diplomatic ties with several Middle Eastern nations, including Israel, Egypt, Jordan, and the six members of the Gulf Cooperation Council (GCC): Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United

Arab Emirates. Because the historical and political circumstances that led to the creation of NATO have been largely absent in the Middle East, the region lacks a similarly strong collective security organization.

When it came into office, the Trump Administration proposed the idea of a multilateral Middle East Strategic Alliance with its Arab partners.³² The initial U.S. concept, which included security, economic cooperation, and conflict resolution and deconfliction, generated considerable enthusiasm, but the project was sidelined by a diplomatic dispute involving Saudi Arabia, the UAE, and Qatar.³³ Middle Eastern countries traditionally have preferred to maintain bilateral relationships with the U.S. and generally have shunned multilateral arrangements because of the lack of trust among Arab states.

This lack of trust manifested itself in June 2017 when the Kingdom of Saudi Arabia, the UAE, Bahrain, Egypt, and several other Muslim-majority countries cut or downgraded diplomatic ties with Qatar after Doha was accused of supporting terrorism in the region.³⁴ All commercial land, air, and sea travel between Qatar and these nations was severed, and Qatari diplomats and citizens were evicted. In January 2021, Saudi Arabia, the UAE, Bahrain, and Egypt agreed to restore ties with Qatar during the 41st Gulf Cooperation Council Summit. Per the agreement, Saudi Arabia and its GCC allies lifted the economic and diplomatic blockade of Qatar, reopening their airspace, land, and sea borders. This diplomatic victory from Washington paves the way toward full reconciliation in the GCC and, at least potentially, a more united front in the Gulf.³⁵

Bilateral and multilateral relations in the region, especially with the U.S. and other Western countries, are often made more difficult by their secretive nature. It is not unusual for governments in this region to see value (and sometimes necessity) in pursuing a relationship with the U.S. while having to account for domestic opposition to working with America: hence the perceived need for secrecy. The

opaqueness of these relationships sometimes creates problems for the U.S. when it tries to coordinate defense and security cooperation with European allies—mainly the United Kingdom (U.K.) and France—that are active in the region.

Military training is an important part of these relationships. These exercises are intended principally to ensure close and effective coordination with key regional partners, demonstrate an enduring U.S. security commitment to regional allies, and train Arab armed forces so that they can assume a larger share of responsibility for regional security.

Israel. America's most important bilateral relationship in the Middle East is with Israel. Both countries are democracies, value free-market economies, and believe in human rights at a time when many Middle Eastern countries reject those values. With support from the United States, Israel has developed one of the world's most sophisticated air and missile defense networks.³⁶ No significant progress on peace negotiations with the Palestinians or on stabilizing Israel's volatile neighborhood is possible without a strong and effective Israeli–American partnership.

After years of strained relations during the Obama Administration, ties between the U.S. and Israel improved significantly during the first two years of the Trump Administration. In May 2018, the U.S. moved its embassy from Tel Aviv to a location in western Jerusalem.³⁷ On January 28, 2020, President Trump unveiled his Israeli–Palestinian peace proposal.³⁸ The plan accorded Israeli security needs a high priority, recognized Israel's vital interest in retaining control of the border with Jordan, and cleared the way for U.S. recognition of Israeli sovereignty over many settlements and Jewish holy sites in the disputed territory of the West Bank.³⁹

So far, the Biden Administration has shown little interest in taking an active role in Israeli–Palestinian peace negotiations. However, if the conflict between the two sides continues to escalate, President Biden may be pressured to become more involved.

Saudi Arabia. After Israel, the U.S. military relationship is deepest with the Gulf States, including Saudi Arabia, which serves as de facto leader of the GCC. America's relationship with Saudi Arabia is based on pragmatism and is important for both security and economic reasons, but it has come under intense strain since the murder of Saudi dissident and *Washington Post* journalist Jamal Ahmad Khashoggi, allegedly by Saudi security services, in Turkey in 2018.

The Saudis enjoy huge influence across the Muslim world, and approximately 2 million Muslims participate in the annual Hajj pilgrimage to the holy city of Mecca. Riyadh has been a key partner in efforts to counter the influence of Iran. The U.S. is also the largest provider of arms to Saudi Arabia and regularly, if not controversially, sells munitions needed to resupply stockpiles expended in the Saudi-led campaign against the Houthis in Yemen.

Gulf Cooperation Council. The GCC's member countries are located close to the Arab-Persian fault line and are therefore strategically important to the U.S.⁴⁰ The root of Arab-Iranian tensions in the Gulf is Tehran's ideological drive to export its Islamist revolution and overthrow the traditional rulers of the Arab kingdoms. This ideological clash has further amplified long-standing sectarian tensions between Shia Islam and Sunni Islam. Tehran has sought to radicalize Shia Arab minority groups to undermine Sunni Arab regimes in Saudi Arabia, Kuwait, and Bahrain. It also sought to incite revolts by the Shia majorities in Iraq against Saddam Hussein's regime and in Bahrain against the Sunni al-Khalifa dynasty. Culturally, many Iranians look down on the Gulf States, many of which they see as artificial entities carved out of the former Persian Empire and propped up by Western powers.

GCC member countries often have difficulty agreeing on a common policy with respect to matters of security. This reflects both the organization's intergovernmental nature and its members' desire to place national interests above those of the GCC. The recent dispute regarding Qatar illustrates this problem.

Another source of disagreement involves the question of how best to deal with Iran. On one end of the spectrum, Saudi Arabia, Bahrain, and the UAE take a hawkish view of the threat from Iran. Oman and Qatar, the former of which prides itself on its regional neutrality and the latter of which shares natural gas fields with Iran, view Iran's activities in the region as less of a threat and maintain cordial relations with Tehran. Kuwait tends to fall somewhere in the middle. Intra-GCC relations also can be problematic.

Egypt. Egypt is another important U.S. military ally. As one of six Arab countries that maintain diplomatic relations with Israel (the others are Jordan, Bahrain, the UAE, Sudan, and Morocco), Egypt is closely enmeshed in the Israeli-Palestinian conflict and remains a leading political, diplomatic, and military power in the region.

Relations between the U.S. and Egypt have been difficult since the 2011 downfall of President Hosni Mubarak after 30 years of rule. The Muslim Brotherhood's Mohamed Morsi was elected president in 2012 and used the Islamist-dominated parliament to pass a constitution that advanced an Islamist agenda. Morsi's authoritarian rule, combined with rising popular dissatisfaction with falling living standards, rampant crime, and high unemployment, led to a massive wave of protests in June 2013 that prompted a military coup in July. The leader of the coup, Field Marshal Abdel Fattah el-Sisi, pledged to restore democracy and was elected president in 2014 and again in 2018 in elections that many considered to be neither free nor fair.

Sisi's government faces major political, economic, and security challenges. Rare anti-government protests broke out for two weeks in September 2018 despite a ban on demonstrations, and waves of arrests and detainments followed in a massive crackdown.⁴¹ The demonstrations exposed Egypt's tenuous stability, and support for President Sisi appears to be waning.

Quality of Armed Forces in the Region

The quality and capabilities of the region's armed forces are mixed. Some countries spend

billions of dollars each year on advanced Western military hardware; others spend very little. Saudi Arabia is by far the region's largest military spender in terms of budget size. As a percentage of GDP, Oman leads the way, spending 11 percent on defense, followed by Saudi Arabia at 8.4 percent in 2020, the most recent year for which data are available.⁴²

Historically, figures on defense spending for the Middle East have been very unreliable, and the lack of data has worsened. For 2020, there were no available data for Qatar, Syria, the United Arab Emirates, and Yemen according to the Stockholm International Peace Research Institute.⁴³

Different security factors drive the degree to which Middle Eastern countries fund, train, and arm their militaries. For Israel, which fought and defeated Arab coalitions in 1948, 1956, 1967, 1973, and 1982, the chief potential threat to its existence is now an Iranian regime that has called for Israel to be “wiped off the map.”⁴⁴ States and non-state actors in the region have responded to Israel's military dominance by investing in asymmetric and unconventional capabilities to offset its military superiority.⁴⁵ For the Gulf States, the main driver of defense policy is the Iranian military threat combined with internal security challenges; for Iraq, it is the internal threat posed by insurgents and terrorists.

The Israel Defense Forces (IDF) are considered one of the most capable military forces in the Middle East. Recently, Iran and other Arab countries have spent billions of dollars in an effort to catch up with Israel, and the resulting “arms race” could threaten Israel's qualitative military effectiveness (QME). Iran is steadily improving its missile capabilities and, due to the expiration of the U.N. conventional arms embargo in October 2020, now has access to the global arms trade.⁴⁶ In response, other Arab countries are procuring and upgrading their weapons capability while establishing officer training programs to improve military effectiveness.⁴⁷

Israel funds its military sector heavily and has a strong national industrial capacity that is supported by significant funding from the U.S.

Combined, these factors give Israel a regional advantage despite limitations of manpower and size. In particular, the IDF has focused on maintaining its superiority in missile defense, intelligence collection, precision weapons, and cyber technologies.⁴⁸ The Israelis regard their cyber capabilities as especially important and use cyber technologies for a number of purposes, including defending Israeli cyberspace, gathering intelligence, and carrying out attacks.⁴⁹

In 2010, Israel signed a \$2.7 billion deal with the U.S. to acquire about 20 F-35I “Adir” Lightning fighter jets, a heavily modified version of the Lockheed Martin F-35 stealth fighter.⁵⁰ In the 2021 conflict with Hamas, these jets were deployed in a major combat operation that targeted dozens of Hamas rocket launch tubes in northern Gaza.⁵¹

Israel maintains its qualitative superiority in medium-range and long-range missile capabilities and fields effective missile defense systems, including Iron Dome and Arrow, both of which the U.S. helped to finance. Israel also has a nuclear weapons capability (which it does not publicly acknowledge) that increases its strength relative to other powers in the region and has helped to deter adversaries as the gap in conventional capabilities has been reduced.

After Israel, the most technologically advanced and best-equipped armed forces are found in the GCC countries. Previously, the export of oil and gas meant that there was no shortage of resources to devote to defense spending, but the collapse of crude oil prices has forced oil-exporting countries to adjust their defense spending patterns. At present, however, GCC nations still have the region's best-funded (even if not necessarily its most effective) Arab armed forces. All GCC members boast advanced defense hardware that reflects a preference for U.S., U.K., and French equipment.

Saudi Arabia maintains the GCC's most capable military force. It has an army of 75,000 soldiers and a National Guard of 100,000 personnel reporting directly to the king. The army operates 900 main battle tanks including

450 U.S.-made M1A2s. Its air force is built around American-built and British-built aircraft and consists of more than 443 combat-capable aircraft that include F-15s, Tornados, and Typhoons.⁵²

In fact, air power is the strong suit of most GCC members. Oman, for example, operates F-16s and Typhoons. In 2018, the U.S. government awarded Lockheed Martin a \$1.12 billion contract to produce 16 new F-16 Block 70 aircraft (Lockheed Martin's newest and most advanced F-16 production configuration) for the Royal Bahraini Air Force.⁵³ Qatar operates French-made Mirage fighters and is buying 24 Typhoons from the U.K.⁵⁴

In November 2020, the U.S. State Department notified Congress that it had approved the sale of a \$23.4 billion defense package of F-35A Joint Strike Fighters, armed drones, munitions, and associated equipment to the UAE. After a temporary freeze on arm sales by the Biden Administration, the sale moved forward in April 2021.⁵⁵ The sale is somewhat controversial, however, because of Israeli concerns about other regional powers also possessing the most modern combat aircraft, potentially challenging an important Israeli advantage.

Middle Eastern countries have shown a willingness to use their military capability under certain and limited circumstances. The navies of GCC member countries rarely deploy beyond their Exclusive Economic Zones, but Kuwait, Bahrain, the UAE, Saudi Arabia, and Qatar have participated in and in some cases have commanded Combined Task Force 152, formed in 2004 to maintain maritime security in the Persian Gulf.⁵⁶ Since 2001, Jordan, Egypt, Bahrain, and the UAE have supplied troops to the U.S.-led mission in Afghanistan. The UAE and Qatar deployed fighters to participate in NATO-led operations over Libya in 2011, although they did not participate in strike operations. To varying degrees, all six GCC members also joined the U.S.-led anti-ISIS coalition, with the UAE contributing the most in terms of air power.⁵⁷ Air strikes in Syria by members of the GCC ended in 2017.

With 438,500 active personnel and 479,000 reserve personnel, Egypt has the largest Arab military force in the Middle East.⁵⁸ It possesses a fully operational military with an army, air force, air defense, navy, and special operations forces. Until 1979, when the U.S. began to supply Egypt with military equipment, Cairo relied primarily on less capable Soviet military technology.⁵⁹ Since then, its army and air force have been significantly upgraded with U.S. military weapons, equipment, and warplanes.

Egypt has struggled with increased terrorist activity in the Sinai Peninsula, including attacks on Egyptian soldiers, attacks on foreign tourists, and the October 2015 bombing of a Russian airliner departing from the Sinai. The Islamic State's "Sinai Province" terrorist group has claimed responsibility for all of these actions.⁶⁰

Jordan is a close U.S. ally and has small but effective military forces. The principal threats to its security include terrorism, turbulence spilling over from Syria and Iraq, and the resulting flow of refugees. Although Jordan faces few conventional threats from its neighbors, its internal security is threatened by Islamist extremists returning from fighting in the region who have been emboldened by the growing influence of al-Qaeda and other Islamist militants. As a result, Jordan's highly professional armed forces have focused on border and internal security in recent years.

Considering Jordan's size, its conventional capability is significant. Jordan's ground forces total 86,000 soldiers and include 182 British-made Challenger 1 tanks and four French-made Leclerc tanks. Forty-seven F-16 Fighting Falcons form the backbone of its air force,⁶¹ and its special operations forces are highly capable, having benefitted from extensive U.S. and U.K. training. Jordanian forces have served in Afghanistan and in numerous U.N.-led peacekeeping operations.

Iraq has fielded one of the region's most dysfunctional military forces. After the 2011 withdrawal of U.S. troops, Iraq's government selected and promoted military leaders according to political criteria.⁶² Shiite army

officers were favored over their Sunni, Christian, and Kurdish counterparts, and former Prime Minister Nouri al-Maliki chose top officers according to their political loyalties. Politicization of the armed forces also exacerbated corruption within many units, with some commanders siphoning off funds allocated for “ghost soldiers” who never existed or had been separated from the army for various reasons.⁶³ It is unclear whether Prime Minister Mustafa al-Kadhimi will follow the same model, but both Iranian Foreign Minister Mohammad Javad Zarif and the United States have welcomed the appointment.⁶⁴

The promotion of incompetent military leaders, poor logistical support due to corruption and other problems, limited operational mobility, and weaknesses in intelligence, reconnaissance, medical support, and air force capabilities have combined to undermine the effectiveness of Iraq’s armed forces. In June 2014, for example, the collapse of as many as four divisions that were routed by vastly smaller numbers of Islamic State fighters led to the fall of Mosul.⁶⁵ The U.S. and its allies responded with a massive training program for the Iraqi military that led to the liberation of Mosul on July 9, 2017.⁶⁶

Current U.S. Military Presence in the Middle East

Before 1980, the limited U.S. military presence in the Middle East consisted chiefly of a small naval force that had been based at Bahrain since 1958. The U.S. “twin pillar” strategy relied on prerevolutionary Iran and Saudi Arabia to take the lead in defending the Persian Gulf from the Soviet Union and its client regimes in Iraq, Syria, and South Yemen,⁶⁷ but the 1979 Iranian revolution demolished one pillar, and the December 1979 Soviet invasion of Afghanistan increased the Soviet threat to the Gulf.

In January 1980, President Jimmy Carter proclaimed in a commitment known as the Carter Doctrine that the United States would take military action to defend oil-rich Persian Gulf States from external aggression. In 1980,

he ordered the creation of the Rapid Deployment Joint Task Force (RDJTF), the precursor to U.S. Central Command (USCENTCOM), which was established in January 1983.⁶⁸

Until the late 1980s, America’s “regional strategy still largely focused on the potential threat of a massive Soviet invasion of Iran.”⁶⁹ After the collapse of the Soviet Union, Saddam Hussein’s Iraqi regime became the chief threat to regional stability. Iraq invaded Kuwait in August 1990, and the United States responded in January 1991 by leading an international coalition of more than 30 nations to expel Saddam’s forces from Kuwait. CENTCOM commanded the U.S. contribution of more than 532,000 military personnel to the coalition’s armed forces, which totaled at least 737,000.⁷⁰ This marked the peak U.S. force deployment in the Middle East.

Confrontations with Iraq continued throughout the 1990s as Iraq continued to violate the 1991 Gulf War cease-fire. Baghdad’s failure to cooperate with U.N. arms inspectors to verify the destruction of its weapons of mass destruction and its links to terrorism led to the U.S. invasion of Iraq in 2003. During the initial invasion, U.S. forces reached nearly 192,000,⁷¹ joined by military personnel from coalition forces. Apart from the “surge” in 2007, when President George W. Bush deployed an additional 30,000 personnel, the number of American combat forces in Iraq fluctuated between 100,000 and 150,000.⁷²

In December 2011, the U.S. officially completed its withdrawal of troops, leaving only 150 personnel attached to the U.S. embassy in Iraq.⁷³ In the aftermath of IS territorial gains in Iraq, however, the U.S. redeployed thousands of troops to the country to assist Iraqi forces against IS and help to build Iraqi capabilities. Despite calls from the Iraqi parliament to expel U.S. troops after the January 2020 air strike that killed General Qassem Suleimani, U.S. forces remain in Iraq and have “consolidated their basing” and “deployed new missile defenses.”⁷⁴ According to U.S. Central Command, U.S. force levels in Iraq declined from 5,200 to 3,000 in August 2020, and in November 2020,

U.S. Access to Bases and Facilities in the Middle East



- JORDAN**
- 1 Muwaffaq Salti Airbase

- IRAQ**
- 2 al-Asad Air Base

- KUWAIT**
- 3 Ali al-Salem Air Base
 - 4 Ahmad al-Jabir Air Base
 - 5 Camp Arifjan

- SAUDI ARABIA**
- 6 Eskan Village Air Base

- BAHRAIN**
- 7 Khalifa bin Salman Port
 - 8 Shaykh Isa Air Base

- QATAR**
- 9 Al Udeid Air Base

- UNITED ARAB EMIRATES**
- 10 Al-Dhafra Air Base
 - 11 Jebel Ali Port
 - 12 Fujairah Naval Base

- OMAN**
- 13 Musnanah Air Base
 - 14 Muscat International Airport
 - 15 RAFO Masirah
 - 16 Al Duqm Port
 - 17 RAFO Thumrait
 - 18 Salalah Port

SOURCE: Heritage Foundation research.

heritage.org

“President Trump directed a further drawdown to 2,500 by January 2021.”⁷⁵

The U.S. also continues to maintain a limited number of forces in other locations in the Middle East, primarily in GCC countries. Rising naval tensions in the Persian Gulf prompted additional deployments of troops, Patriot missile batteries, and combat aircraft to the Gulf in late 2019 to deter Iran, although reductions in U.S. forces were subsequently announced in May 2020.⁷⁶ The decision perhaps indicated a shifting strategy to counter Iran or an assessment by U.S. officials of a reduced risk as Iran continued to mitigate the economic and political effects of COVID-19.

As of early 2020, “approximately 14,000 U.S. military personnel had been added to a baseline of more than 60,000 U.S. forces in and around the Persian Gulf...and those in Iraq and Afghanistan.”⁷⁷ Although their exact disposition is hard to triangulate because of the fluctuating nature of U.S. military operations in the region,⁷⁸ information gleaned from open sources reveals the following:

- **Kuwait.** More than 13,500 U.S. personnel are based in Kuwait and are spread among Camp Arifjan, Ahmad al-Jabir Air Base, and Ali al-Salem Air Base. A large depot of prepositioned equipment and a squadron of fighters and Patriot missile systems are also deployed to Kuwait.⁷⁹
- **UAE.** About 3,500 U.S. personnel are deployed at Jebel Ali port, Al Dhafra Air Base, and naval facilities at Fujairah. Jebel Ali port is the U.S. Navy’s busiest port of call for aircraft carriers. U.S. Air Force personnel who are stationed in the UAE use Al Dhafra Air Base to operate fighters, unmanned aerial vehicles (UAVs), refueler aircraft, and surveillance aircraft. In addition, the United States has regularly deployed F-22 Raptor combat aircraft to Al Dhafra and recently deployed the F-35 combat aircraft because of escalating tensions with Iran. Patriot missile systems are deployed for air and missile defense.⁸⁰
- **Oman.** In 1980, Oman became the first Gulf State to welcome a U.S. military base. Today, it provides important access in the form of over 5,000 aircraft overflights, 600 aircraft landings, and 80 port calls annually. The number of U.S. military personnel in Oman has fallen to a few hundred, mostly from the U.S. Air Force. According to the Congressional Research Service, “the United States reportedly has access to Oman’s military airfields in Muscat (the capital), Thumrait, Masirah Island, and Musnanah” as well as (pursuant to a March 2019 Strategic framework Agreement) the ports of Al Duqm and Salalah.⁸¹
- **Bahrain.** Approximately 5,000 U.S. military personnel are based in Bahrain. Because Bahrain is home to Naval Support Activity Bahrain and the U.S. Fifth Fleet, most U.S. military personnel there belong to the U.S. Navy. A significant number of U.S. Air Force personnel operate out of Shaykh Isa Air Base, where F-16s, F/A-18s, and P-8 surveillance aircraft are stationed. U.S. Patriot missile systems also are deployed to Bahrain. The deep-water port of Khalifa bin Salman is one of the few facilities in the Gulf that can accommodate U.S. aircraft carriers.⁸²
- **Saudi Arabia.** The U.S. withdrew the bulk of its forces from Saudi Arabia in 2003. After the October 2019 attacks on Saudi Arabia’s oil and natural gas facilities, the U.S. Department of Defense deployed 3,000 additional troops and sent radar and missile systems to improve air defenses, an air expeditionary wing to support fighter aircraft, and two fighter squadrons in an effort to deter future attacks.⁸³ This large-scale military buildup to counter Iran was reduced in May 2020 after the U.S. removed two Patriot missile batteries and dozens of troops that had been deployed during the troop buildup.⁸⁴ The six-decade-old United States Military Training Mission to the Kingdom of Saudi Arabia, the four-decade-old Office of the

Program Manager of the Saudi Arabian National Guard Modernization Program, and the Office of the Program Manager–Facilities Security Force are based in Eskan Village Air Base approximately 13 miles south of the capital city of Riyadh.⁸⁵

- **Qatar.** More than 8,000 U.S. personnel, mainly from the U.S. Air Force, are deployed in Qatar.⁸⁶ The U.S. operates its Combined Air Operations Center at Al Udeid Air Base, which is one of the world’s most important U.S. air bases. It is also the base from which the anti-ISIS campaign was headquartered. Heavy bombers, tankers, transports, and ISR (intelligence, surveillance, and reconnaissance) aircraft operate from Al Udeid Air Base, which also serves as the forward headquarters of CENTCOM. The base houses prepositioned U.S. military equipment and is defended by U.S. Patriot missile systems. So far, the recent diplomatic moves by Saudi Arabia and other Arab states against Doha have not affected the United States’ relationship with Qatar.
- **Jordan.** According to CENTCOM, Jordan “is one of [America’s] strongest and most reliable partners in the Levant sub-region.”⁸⁷ Although there are no U.S. military bases in Jordan, the U.S. has a long history of conducting training exercises in the country. Due to recent events in neighboring Syria, in addition to other military assets like fighter jets and air defense systems, “approximately 3,145 U.S. military personnel are deployed to Jordan to support Defeat-ISIS operations, enhance Jordan’s security, and promote regional stability.”⁸⁸

CENTCOM “directs and enables military operations and activities with allies and partners to increase regional security and stability in support of enduring U.S. interests.”⁸⁹ Execution of this mission is supported by four service component commands (U.S. Naval Forces Middle East [USNAVCENT]; U.S. Army Forces

Middle East [USARCENT]; U.S. Air Forces Middle East [USAFCENT]; and U.S. Marine Forces Middle East [MARCENT]) and one subordinate unified command (U.S. Special Operations Command Middle East [SOCCENT]).

- **U.S. Naval Forces Central Command.** USNAVCENT is USCENTCOM’s maritime component. With its forward headquarters in Bahrain, it is responsible for commanding the afloat units that rotationally deploy or surge from the United States in addition to other ships that are based in the Gulf for longer periods. USNAVCENT conducts persistent maritime operations to advance U.S. interests, deter and counter disruptive countries, defeat violent extremism, and strengthen partner nations’ maritime capabilities in order to promote a secure maritime environment in an area that encompasses approximately 2.5 million square miles of water.
- **U.S. Army Forces Central Command.** USARCENT is USCENTCOM’s land component. Based in Kuwait, it is responsible for land operations in an area that totals 4.6 million square miles (1.5 times larger than the continental United States).
- **U.S. Air Forces Central Command.** USAFCENT is USCENTCOM’s air component. Based in Qatar, it is responsible for air operations and for working with the air forces of partner countries in the region. It also manages an extensive supply and equipment prepositioning program at several regional sites.
- **U.S. Marine Forces Central Command.** MARCENT is USCENTCOM’s designated Marine Corps service component. Based in Bahrain, it is responsible for all Marine Corps forces in the region.
- **U.S. Special Operations Command Central.** SOCCENT is a subordinate unified command under USCENTCOM.

Based in Qatar, it is responsible for planning special operations throughout the USCENTCOM region, planning and conducting peacetime joint/combined special operations training exercises, and orchestrating command and control of peacetime and wartime special operations.

In addition to the American military presence in the region, two U.S. allies—the United Kingdom and France—play an important role.

The U.K.'s presence in the Middle East is a legacy of British imperial rule. The U.K. has maintained close ties with many countries that it once ruled and has conducted military operations in the region for decades. Approximately 1,350 British service personnel are based throughout the region. This number fluctuates with the arrival of visiting warships.⁹⁰

The British presence in the region is dominated by the Royal Navy. Permanently based naval assets include four mine hunters and one Royal Fleet Auxiliary supply ship. In addition, there generally are frigates or destroyers in the Gulf or Arabian Sea performing maritime security duties,⁹¹ and although such matters are not the subject of public discussion, U.K. attack submarines operate in the area. In April 2018, as a sign of its long-term maritime presence in the region, the U.K. opened a base in Bahrain—its first overseas military base in the Middle East in more than four decades.⁹² The U.K. has made a multimillion-dollar investment in modernization of the Duqm Port complex in Oman to accommodate its new *Queen Elizabeth*-class aircraft carriers.⁹³

The U.K. has a sizeable Royal Air Force (RAF) presence in the region as well, mainly in the UAE and Oman. A short drive from Dubai, Al-Minhad Air Base is home to a small contingent of U.K. personnel, and small RAF detachments in Oman support U.K. and coalition operations in the region. Although considered to be in Europe, the U.K.'s Sovereign Base Areas of Akrotiri and Dhekelia in Cyprus have supported U.S. military and intelligence operations in the past, and it is expected that they will continue to do so.

The British presence in the region extends beyond soldiers, ships, and planes. A British-run staff college operates in Qatar, and Kuwait chose the U.K. to help run its own equivalent of the Royal Military Academy at Sandhurst.⁹⁴ The U.K. also plays a very active role in training the Saudi Arabian and Jordanian militaries.

The French presence in the Gulf is smaller than the U.K.'s but still significant. France opened its first military base in the Gulf in 2009. Located in the emirate of Abu Dhabi, it was the first foreign military installation built by the French in 50 years.⁹⁵ The French have 700 personnel based in the UAE, along with eight Rafale jets, as well as military operations in Kuwait and Qatar.⁹⁶ French ships have access to the Zayed Port in Abu Dhabi, which is big enough to handle every ship in the French Navy except the aircraft carrier *Charles De Gaulle*.

Military support from the U.K. and France has been particularly important in Operation Inherent Resolve, a U.S.-led joint task force formed to combat the Islamic State in Iraq and Syria. In March 2020, France and the U.K. announced that they would be reducing their footprint in Iraq because of the impact of COVID-19.⁹⁷ However, as of February 2021, the French Armed Forces had resumed their operations. France has 650 troops stationed in the UAE, 600 stationed in Syria and Iraq, and 700 stationed in Lebanon.⁹⁸ The U.K. temporarily redeployed troops back to the U.K. as a result of COVID-19 but announced in February 2021 that the 500 troops would be sent back alongside an additional 3,500 extra troops to boost its counterterrorism training mission in Iraq.⁹⁹ Additional troops will help to prevent the IS from returning and manage threats from Iran-backed militias more effectively.

Another important actor in Middle East security is the small East African country of Djibouti. Djibouti sits on the Bab el-Mandeb Strait, through which an estimated 6.2 million barrels of oil a day transited in 2018 (the most recent year for which U.S. Energy Administration data are available) and which is a choke point on the route to the Suez Canal.¹⁰⁰ An increasing number of countries recognize

Djibouti's value as a base from which to project maritime power and launch counterterrorism operations. The country is home to Camp Lemonnier, which can hold as many as 4,000 personnel and is the only permanent U.S. military base in Africa.¹⁰¹

China is also involved in Djibouti and has its first permanent overseas base there, which can house 10,000 troops and which Chinese marines have used to stage live-fire exercises featuring armored combat vehicles and artillery. France, Italy, and Japan also have presences of varying strength in Djibouti.¹⁰²

Key Infrastructure and Warfighting Capabilities

The Middle East is critically situated geographically. Two-thirds of the world's population lives within an eight-hour flight from the Gulf region, making it accessible from most other regions of the globe. The Middle East also contains some of the world's most critical maritime choke points, including the Suez Canal and the Strait of Hormuz.

Although infrastructure is not as developed in the Middle East as it is in North America or Europe, during a decades-long presence, the U.S. has developed systems that enable it to move large numbers of matériel and personnel into and out of the region. According to the Department of Defense, at the height of U.S. combat operations in Iraq during the Second Gulf War, the U.S. presence included 165,000 servicemembers and 505 bases. Moving personnel and equipment out of the country was "the largest logistical drawdown since World War II" and included redeployment of "the 60,000 troops who remained in Iraq at the time and more than 1 million pieces of equipment ahead of their deadline."¹⁰³

The condition of the region's roads varies from country to country. The most recent available data reflect that 100 percent of the roads in Israel, Jordan, and the UAE are paved. Other nations—for example, Oman (49.3 percent); Saudi Arabia (21.5 percent); and Yemen (8.7 percent)—have poor paved road coverage.¹⁰⁴ Rail coverage is also poor.

The U.S. has access to several airfields in the region. The primary air hub for U.S. forces is Al Udeid Air Base in Qatar. Other airfields include Ali Al Salem Air Base, Kuwait; Al Dhafra, UAE; Al Minhad, UAE; Isa, Bahrain; Eskan Village Air Base, Saudi Arabia; Muscat, Oman; Thumrait, Oman; and Masirah Island, Oman, in addition to the commercial airport at Seeb, Oman. In the past, the U.S. has used major airfields in Iraq, including Baghdad International Airport and Balad Air Base, as well as Prince Sultan Air Base in Saudi Arabia.

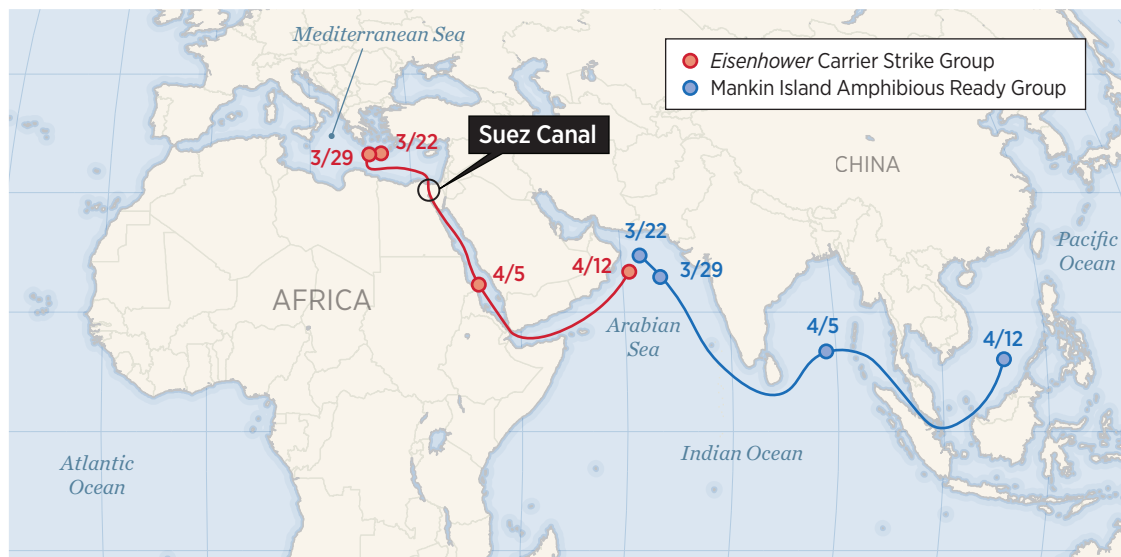
The fact that a particular air base is available to the U.S. today, however, does not necessarily mean that it will be available for a particular operation in the future. For example, because of their more cordial relations with Iran, it is highly unlikely that Qatar and Oman would allow the U.S. to use air bases in their territory for strikes against Iran unless they were first attacked themselves.

The U.S. has access to ports in the region, perhaps most importantly in Bahrain, as well as a deep-water port, Khalifa bin Salman, in Bahrain and naval facilities at Fujairah, UAE.¹⁰⁵ The UAE's commercial port of Jebel Ali is open for visits from U.S. warships and the prepositioning of equipment for operations in theater.¹⁰⁶ In March 2019, "Oman and the United States signed a 'Strategic Framework Agreement' that expands the U.S.–Oman facilities access agreements by allowing U.S. forces to use the ports of Al Duqm and Salalah."¹⁰⁷ The location of these ports outside the Strait of Hormuz makes them particularly useful. Approximately 90 percent of the world's trade travels by sea, and some of the busiest and most important shipping lanes are located in the Middle East. Tens of thousands of cargo ships travel through the Strait of Hormuz and the Bab el-Mandeb Strait each year.

Given the high volume of maritime traffic in the region, no U.S. military operation can be undertaken without consideration of how these shipping lanes offer opportunity and risk to America and her allies. The major shipping routes include:

The Effect of the Suez Canal Blockage on the U.S. Navy

Suez Canal operations were suspended March 23–29 due to the grounding of a container ship, which created a 360-ship traffic jam. The *Eisenhower* Carrier Strike Group (CSG) transited the canal April 2 and arrived on station in the Arabian Sea 10 days later. If the *Eisenhower* CSG had had to circumnavigate Africa, the trip would have taken about three weeks.



SOURCE: U.S. Naval Institute News, “USNI News Fleet and Marine Tracker,” <https://news.usni.org/category/fleet-tracker> (accessed August 19, 2021).

heritage.org

- The Suez Canal.** In 2020, more than 19,000 ships transited the Suez Canal, averaging 51.5 ships each day.¹⁰⁸ Considering that the canal itself is 120 miles long but only 670 feet wide, this is an impressive amount of traffic. The Suez Canal is important to Europe because it provides access to oil from the Middle East. It also serves as an important strategic asset, as it is used routinely by the U.S. Navy to move surface combatants between the Mediterranean Sea and the Red Sea. Thanks to a bilateral arrangement between Egypt and the United States, the U.S. Navy enjoys priority access to the canal.¹⁰⁹

The journey through the narrow waterway is no easy task for large surface combatants. The canal was not constructed with the aim of accommodating 100,000-ton aircraft carriers and therefore exposes a larger ship to attack. For this reason, different types of security protocols are followed, including the provision of air support by the Egyptian military.¹¹⁰ These security protocols, however, are not fool-proof. In April 2021, the Suez Canal was closed for over 11 days after a container ship blocked the waterway, creating a 360-ship traffic jam that disrupted almost 13 percent of global maritime traffic. This crisis proves that ever-larger container

ships transiting strategic choke points are prone to accidents that can lead to massive disruptions of both global maritime trade and U.S. maritime security.¹¹¹

- **Strait of Hormuz.** According to the U.S. Energy Information Administration, the Strait of Hormuz, which links the Persian Gulf with the Arabian Sea and the Gulf of Oman, “is the world’s most important oil chokepoint because of the large volumes of oil that flow through the strait. In 2018, its daily oil flow averaged 21 million barrels per day (b/d), or the equivalent of about 21% of global petroleum liquids consumption.” In addition, “China, India, Japan, South Korea, and Singapore were the largest destinations for crude oil moving through the Strait of Hormuz to Asia, accounting for 65% of all Hormuz crude oil and condensate flows in 2018.”¹¹² Given the extreme narrowness of the passage and its proximity to Iran, shipping routes through the Strait of Hormuz are particularly vulnerable to disruption. Iran attacked oil tankers repeatedly in May and June 2019 and continues to harass U.S. naval ships.¹¹³
- **Bab el-Mandeb Strait.** The Bab el-Mandeb Strait is a strategic waterway located between the Horn of Africa and Yemen that links the Red Sea to the Indian Ocean. Exports from the Persian Gulf and Asia destined for Western markets must pass through the strait en route to the Suez Canal. Because the Bab el-Mandeb Strait is 18 miles wide at its narrowest point, passage is limited to two channels for inbound and outbound shipments.¹¹⁴

Maritime Prepositioning of Equipment and Supplies. The U.S. military has deployed noncombatant maritime prepositioning ships (MPS) containing large amounts of military equipment and supplies in strategic locations from which they can reach areas of conflict relatively quickly as associated U.S. Army or Marine Corps units located elsewhere arrive

in the area. The British Indian Ocean Territory of Diego Garcia, an island atoll, hosts the U.S. Naval Support Facility Diego Garcia, which supports prepositioning ships that can supply Army or Marine Corps units deployed for contingency operations in the Middle East.

Conclusion

For the foreseeable future, the Middle East region will remain a key focus for U.S. military planners. Once considered relatively stable, mainly because of the ironfisted rule of authoritarian regimes, the area is now highly unstable and a breeding ground for terrorism.

Overall, regional security has deteriorated in recent years. Even though the Islamic State (or at least its physical presence) appears to have been defeated, the nature of its successor is unclear. Iraq has restored its territorial integrity since the defeat of ISIS, but the political situation and future relations between Baghdad and the U.S. will remain difficult as long as a government that is sympathetic to Iran is in power.¹¹⁵ Although the regional dispute with Qatar is now resolved, U.S. relations in the region will remain complex and difficult to manage, although this has not stopped the U.S. military from operating.

Many of the borders created after World War I are under significant stress. In countries like Iraq, Libya, Syria, and Yemen, the supremacy of the nation-state is being challenged by non-state actors that wield influence, power, and resources comparable to those of small states. The region’s principal security and political challenges are linked to the unrealized aspirations of the Arab Spring, surging transnational terrorism, and meddling by Iran, which seeks to extend its influence in the Islamic world. These challenges are made more difficult by the Arab–Israeli conflict, Sunni–Shia sectarian divides, the rise of Iran’s Islamist revolutionary nationalism, and the proliferation of Sunni Islamist revolutionary groups. COVID-19 has already exacerbated these economic, political, and regional crises, which may destabilize the post-pandemic operational environment for U.S. forces.

Thanks to its decades of military operations in the Middle East, the U.S. has the tried-and-tested procedures needed to operate in the region. Bases and infrastructure are well established, and the logistical processes for maintaining a large force forward deployed thousands of miles away from the homeland are well in place. Moreover, unlike in Europe, all of these processes have been tested recently in combat. The personal links between allied armed forces are also present. Joint training exercises improve interoperability,

and U.S. military educational courses that are regularly attended by officers (and often royals) from the Middle East provide an opportunity for the U.S. to influence some of the region's future leaders.

America's relationships in the region are based pragmatically on shared security and economic concerns. As long as these issues remain relevant to both sides, the U.S. is likely to have an open door to operate in the Middle East when its national interests require that it do so.

Scoring the Middle East Operating Environment

As noted at the beginning of this section, various aspects of the region facilitate or inhibit the ability of the U.S. to conduct military operations to defend its vital national interests against threats. Our assessment of the operating environment uses a five-point scale that ranges from “very poor” to “excellent” conditions and covers four regional characteristics of greatest relevance to the conduct of military operations:

1. **Very Poor.** Significant hurdles exist for military operations. Physical infrastructure is insufficient or nonexistent, and the region is politically unstable. In addition, the U.S. military is poorly placed or absent, and alliances are nonexistent or diffuse.
2. **Unfavorable.** A challenging operating environment for military operations is marked by inadequate infrastructure, weak alliances, and recurring political instability. The U.S. military is inadequately placed in the region.
3. **Moderate.** A neutral to moderately favorable operating environment is characterized by adequate infrastructure, a moderate alliance structure, and acceptable levels of regional political stability. The U.S. military is adequately placed.

4. **Favorable.** A favorable operating environment includes good infrastructure, strong alliances, and a stable political environment. The U.S. military is well placed for future operations.

5. **Excellent.** An extremely favorable operating environment includes well-established and well-maintained infrastructure, strong and capable allies, and a stable political environment. The U.S. military is exceptionally well placed to defend U.S. interests.

The key regional characteristics consist of:

- a. **Alliances.** Alliances are important for interoperability and collective defense, as allies are more likely to lend support to U.S. military operations. Indicators that provide insight into the strength or health of an alliance include whether the U.S. trains regularly with countries in the region, has good interoperability with the forces of an ally, and shares intelligence with nations in the region.
- b. **Political Stability.** Political stability brings predictability for military planners when considering such things as transit, basing, and overflight rights for U.S. military operations. The overall degree

of political stability indicates whether U.S. military actions would be hindered or enabled and reflects, for example, whether transfers of power are generally peaceful and whether there have been any recent instances of political instability in the region.

- c. U.S. Military Positioning.** Having military forces based or equipment and supplies staged in a region greatly facilitates the ability of the United States to respond to crises and, presumably, achieve success in critical “first battles” more quickly. Being routinely present in a region also helps the U.S. to remain familiar with its characteristics and the various actors that might either support or try to thwart U.S. actions. With this in mind, we assessed whether or not the U.S. military was well positioned in the region. Again, indicators included bases, troop presence, prepositioned equipment, and recent examples of military operations (including training and humanitarian) launched from the region.
- d. Infrastructure.** Modern, reliable, and suitable infrastructure is essential to military operations. Airfields, ports, rail lines, canals, and paved roads enable the U.S. to stage, launch, and logistically sustain combat operations. We combined expert

knowledge of regions with publicly available information on critical infrastructure to arrive at our overall assessment of this metric.¹¹⁶

The U.S. has developed an extensive network of bases in the Middle East region and has acquired substantial operational experience in combatting regional threats. At the same time, however, many of America’s allies are hobbled by political instability, economic problems, internal security threats, and mushrooming transnational threats. Although the region’s overall score remains “moderate,” as it was last year, it is in danger of falling to “poor” because of political instability and growing bilateral tensions with allies over the security implications of the nuclear agreement with Iran and how best to fight the Islamic State.

With this in mind, we arrived at these average scores for the Middle East (rounded to the nearest whole number):

- Alliances: **3—Moderate**
- Political Stability: **2—Unfavorable**
- U.S. Military Positioning: **3—Moderate**
- Infrastructure: **3—Moderate**

Leading to a regional score of: **Moderate**

Operating Environment: Middle East

	VERY POOR	UNFAVORABLE	MODERATE	FAVORABLE	EXCELLENT
Alliances			✓		
Political Stability		✓			
U.S. Military Posture			✓		
Infrastructure			✓		
OVERALL			✓		

Endnotes

1. For example, during a 1916 meeting in Downing Street, Sir Mark Sykes, Britain's lead negotiator with the French on carving up the Ottoman Empire in the Middle East, pointed to the map and told the Prime Minister that for Britain's sphere of influence in the Middle East, "I should like to draw a line from the e in Acre [modern-day Israel] to the last k in Kirkuk [modern-day Iraq]." See James Barr, *A Line in the Sand: Britain, France, and the Struggle That Shaped the Middle East* (London: Simon & Schuster U.K., 2011), pp. 7–20. See also Margaret McMillan, *Paris 1919: Six Months That Changed the World* (New York: Random House, 2003).
2. S.B., "What Is the Difference Between Sunni and Shia Muslims?" *The Economist*, May 29, 2013, <http://www.economist.com/blogs/economist-explains/2013/05/economist-explains-19/> (accessed May 26, 2021).
3. Tzvi Joffe, "Iranian Shias Lick, Kiss Shrines in Defiance of Coronavirus Outbreak," *The Jerusalem Post*, March 2, 2020, <https://www.jpost.com/middle-east/iranian-shias-lick-kiss-shrines-in-defiance-of-coronavirus-outbreak-619428> (accessed May 26, 2021), and Nicole Robinson, "Middle East Coronavirus Data Sketchy, Leaving Populaces to Suffer," Heritage Foundation *Commentary*, April 7, 2020, <https://www.heritage.org/middle-east/commentary/middle-east-coronavirus-data-sketchy-leaving-populaces-suffer>.
4. Sabahat Khan, "MENA's Youth Bulge Is a Regional Security Challenge," *The Arab Weekly*, April 2, 2018, <https://the arabweekly.com/menas-youth-bulge-regional-security-challenge> (accessed May 26, 2021).
5. Organization of the Petroleum Exporting Countries, "Datagraphs: OPEC Share of World Crude Oil Reserves, 2018," https://www.opec.org/opec_web/en/data_graphs/330.htm (accessed May 26, 2021).
6. Table, "The 10 Largest Oil Producers and Share of Total World Oil Production in 2020," and table, "The 10 Largest Oil Consumers and Share of Total World Oil Consumption in 2018," in U.S. Department of Energy, Energy Information Administration, "Frequently Asked Questions (FAQs): What Countries Are the Top Producers and Consumers of Oil?" last updated April 1, 2021, <https://www.eia.gov/tools/faqs/faq.php?id=709&t=6> (accessed May 26, 2021).
7. Martha C. White, "Will Oil's Price Slump Be Worse for the Economy than the Effects of the Coronavirus?" NBC News, updated April 22, 2020, <https://www.nbcnews.com/business/energy/will-oil-s-price-slump-be-worse-economy-effects-coronavirus-n1189001> (accessed May 26, 2021).
8. Reuters, "Saudi Arabia's GDP Contracts 3.3% in Q1 on Oil Output, Non-Oil Economy Recovers," May 10, 2021, <https://www.reuters.com/world/middle-east/saudi-arabias-gdp-contracts-33-q1-oil-output-non-oil-economy-recovers-2021-05-10/> (accessed May 26, 2021).
9. Rabah Arezki and Ha Nguyen, "Coping with a Dual Shock: COVID-19 and Oil Prices," World Bank *Brief*, April 14, 2020, <https://www.worldbank.org/en/region/mena/brief/coping-with-a-dual-shock-coronavirus-covid-19-and-oil-prices> (accessed May 26, 2021).
10. Oliver Reynolds, "The World's Top 5 Largest Economies in 2024," FocusEconomics, February 16, 2021, <https://www.focus-economics.com/blog/the-largest-economies-in-the-world> (accessed May 26, 2021), and U.S. Department of Energy, Energy Information Administration, "Country Analysis Executive Summary: Japan," last updated October 2020, https://www.eia.gov/international/content/analysis/countries_long/Japan/japan.pdf (accessed May 26, 2021).
11. Table 2.4.1, "Middle East and North Africa Forecast Summary," and Table 2.4.2, "Middle East and North Africa Economy Forecasts," in World Bank Group, *Global Economic Prospects*, January 2021, p. 94, <https://www.worldbank.org/en/publication/global-economic-prospects> (accessed May 26, 2021).
12. James Phillips and Nicole Robinson, "How COVID-19 Exacerbates Lebanon's Mounting Economic, Political Woes," April 16, 2020, <https://www.heritage.org/middle-east/commentary/how-covid-19-exacerbates-lebanons-mounting-economic-political-woes>.
13. See, for example, The Heritage Foundation, "The 'Arab Spring': Heritage Foundation Recommendations," Heritage Foundation *WebMemo* No. 3222, April 13, 2011, <https://www.heritage.org/middle-east/report/the-arab-spring-heritage-foundation-recommendations>.
14. Marwan Muasher, "Is This the Arab Spring 2.0?" Carnegie Endowment for International Peace *Commentary*, October 30, 2019, <https://carnegieendowment.org/2019/10/30/is-this-arab-spring-2.0-pub-80220> (accessed May 26, 2021).
15. Najia Houssari, "Disappointed Lebanese Protestors Return to Street Demanding End of Deadlock," *Arab News*, April 10, 2021, <https://www.arabnews.com/node/1840806/middle-east> (accessed May 26, 2021), and Middle East Eye, "US Warns Pandemic Could Push Some Middle East Countries to Collapse," April 15, 2021, <https://www.middleeasteye.net/news/middle-east-destabilising-conditions-push-countries-collapse-us-report> (accessed May 26, 2021).
16. James Phillips and Nicole Robinson, "Protesters in Iraq Have Legitimate Grievances," Heritage Foundation *Commentary*, October 9, 2019, <https://www.heritage.org/middle-east/commentary/protesters-iraq-have-legitimate-grievances>, and James Phillips and Nicole Robinson, "Why Protests Rocking Lebanon Forced out the Prime Minister," Heritage Foundation *Commentary*, October 30, 2019, <https://www.heritage.org/middle-east/commentary/why-protests-rocking-lebanon-forced-out-the-prime-minister>.

17. See U.S. Department of the Treasury, “Joint Plan of Action (JPOA) Archive and Joint Comprehensive Plan of Action (JCPOA) Archive,” <https://home.treasury.gov/policy-issues/financial-sanctions/sanctions-programs-and-country-information/iran-sanctions/joint-plan-of-action-jpoa-archive-and-joint-comprehensive-plan-of-action-jcpoa-archive> (accessed May 26, 2021).
18. James Phillips, “U.S. Iran Policy After the Demise of the Nuclear Deal,” Heritage Foundation *Backgrounder* No. 3335, August 6, 2018, <https://www.heritage.org/middle-east/report/us-iran-policy-after-the-demise-the-nuclear-deal>, and John Irish and Robin Emmot, “Europeans Push Last Bid to Salvage Iran Deal, but Work on Plan B,” Reuters, May 3, 2018, <https://www.reuters.com/article/us-iran-nuclear-europe/europeans-push-last-bid-to-salvage-iran-deal-but-work-on-plan-b-idUSKBN1I42ES> (May 26, 2021).
19. 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 May 26, 2021).
20. U.S. Department of the Treasury, “Sanctions Programs and Country Information: Iran Sanctions,” last updated March 5, 2021, <https://home.treasury.gov/policy-issues/financial-sanctions/sanctions-programs-and-country-information/iran-sanctions> (accessed May 26, 2021), and 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>.
21. Robert Berger, “Israel Welcomes Trump’s ‘Bold’ Decision to Leave Iran Deal,” Voice of America, May 9, 2018, <https://www.voanews.com/middle-east/israel-welcomes-trumps-bold-decision-leave-iran-deal> (accessed May 26, 2021), and “Saudi Arabia Welcomes US Withdrawal from Iran Nuclear Deal,” *Arab News*, updated May 9, 2018, <http://www.arabnews.com/node/1299156/saudi-arabia> (accessed May 26, 2021).
22. James Phillips, “Biden Must Stand Up to Iran’s Proxy Extortion Strategy,” Heritage Foundation *Commentary*, March 8, 2021, <https://www.heritage.org/middle-east/commentary/biden-must-stand-irans-proxy-extortion-strategy>, and James Phillips, “U.S. Enters Multilateral Minefield in Indirect Nuclear Talks with Iran,” Heritage Foundation *Commentary*, April 6, 2021, <https://www.heritage.org/middle-east/commentary/us-enters-multilateral-minefield-indirect-nuclear-talks-iran>.
23. James Phillips, “How U.S. Strike Against Iranian General Changes the Rules of the Game in Iraq Region,” Heritage Foundation *Commentary*, January 5, 2020, <https://www.heritage.org/middle-east/commentary/how-us-strike-against-iranian-general-changes-the-rules-the-game-iraq-region>.
24. Sune Engel Rasmussen and Zahra Nader, “Iran Covertly Recruits Afghan Shias to Fight in Syria,” *The Guardian*, June 30, 2016, <https://www.theguardian.com/world/2016/jun/30/iran-covertly-recruits-afghan-soldiers-to-fight-in-syria> (accessed May 26, 2021).
25. BBC News, “Hague Fury as ‘Iranian Arms’ Bound for Taliban Seized,” March 9, 2011, <http://www.bbc.com/news/uk-12694266> (accessed May 26, 2021).
26. Chris Massaro, “US Has the Military Might, but Iran Will Lean on Proxies and Militias If They Get Dragged into the Conflict,” Fox News, May 20, 2019, <https://www.foxnews.com/world/us-military-might-iran-proxies-militias-conflict> (accessed May 26, 2021); Bruce Clingan, “Commentary: The U.S. Is Right to Restore Aid to Egypt,” Reuters, July 30, 2018, <https://www.reuters.com/article/us-clingan-egypt-commentary/commentary-the-u-s-is-right-to-restore-aid-to-egypt-idUSKBN1KKIYE> (accessed May 19, 2020); and Fact Sheet, “Jordan,” United Nations High Commissioner for Refugees, October 2019, <https://data2.unhcr.org/en/documents/download/72076> (accessed May 26, 2021).
27. Peter Brookes and James Phillips, “The Growing Danger of Iran’s Missile Programs,” Heritage Foundation *Backgrounder* No. 3605, April 13, 2021, <https://www.heritage.org/middle-east/report/the-growing-danger-irans-missile-programs>.
28. “Past Month ‘Deadliest on Record’ for Syrian Civilians Killed in US-Led Air Strikes,” *The Independent*, May 23, 2017, <http://www.independent.co.uk/news/world/middle-east/syria-war-us-air-strikes-civilian-death-toll-deadliest-on-record-isis-donald-trump-a7751911.html> (accessed May 26, 2021), and United Nations High Commissioner for Refugees, “Syria Emergency,” updated March 15, 2021, <https://www.unhcr.org/en-us/syria-emergency.html> (accessed May 26, 2021).
29. Les Picker, “Where Are ISIS’s Foreign Fighters Coming From?” National Bureau of Economic Research *Digest*, June 2016, p. 6, <https://www.nber.org/digest/jun16/jun16.pdf> (accessed May 26, 2021).
30. James Phillips, “How the Israel–Bahrain Peace Deal Will Reshape the Middle East,” Heritage Foundation *Commentary*, September 17, 2020, <https://www.heritage.org/middle-east/commentary/how-the-israel-bahrain-peace-deal-will-reshape-the-middle-east>.
31. James Phillips, “Hamas Exploits Palestinian Unrest to Launch Rocket War Against Israel,” Heritage Foundation *Commentary*, May 12, 2021, <https://www.heritage.org/middle-east/commentary/hamas-exploits-palestinian-unrest-launch-rocket-war-against-israel>, and BBC News, “Israel–Gaza Ceasefire Holds Despite Jerusalem Clash,” May 21, 2021, <https://www.bbc.com/news/world-middle-east-57195537> (accessed May 26, 2021).
32. Luke Coffey and James Phillips, “The Middle East Strategic Alliance: An Uphill Struggle,” Heritage Foundation *Issue Brief* No. 5056, April 7, 2020, <https://www.heritage.org/middle-east/report/the-middle-east-strategic-alliance-uphill-struggle>.

33. Joshua Meserve, "The Saudi-Qatari Dispute: Why the U.S. Must Prevent Spillover into East Africa," Heritage Foundation *Backgrounder* No. 3268, November 29, 2017, <https://www.heritage.org/africa/report/the-saudi-qatari-dispute-why-the-us-must-prevent-spillover-east-africa>.
34. Tamara Qiblawi, Mohammed Tawfeeq, Elizabeth Roberts, and Hamdi Alkhshali, "Qatar Rift: Saudi, UAE, Bahrain, Egypt Cut Diplomatic Ties," CNN, updated July 27, 2017, <https://www.cnn.com/2017/06/05/middleeast/saudi-bahrain-egypt-uae-qatar-terror/index.html> (accessed May 26, 2021).
35. Nicole Robinson, "Qatar's Normalization with Gulf States Could Pave the Way Toward a Secure and Stable Persian Gulf," Heritage Foundation *Commentary*, January 8, 2021, <https://www.heritage.org/middle-east/commentary/qatars-normalization-gulf-states-could-pave-the-way-toward-secure-and-stable>.
36. Pieter D. Wezeman, "Conventional Strategic Military Capabilities in the Middle East," EU Non-Proliferation Consortium *Background Paper*, July 2011, p. 8, <https://www.sipri.org/sites/default/files/2016-03/Conventional-strategic-military-capabilities-in-the-Middle-East.pdf> (accessed May 27, 2021). Prepared for "EU Seminar to promote confidence building and in support of a process aimed at establishing a zone free of WMD and means of delivery in the Middle East," Brussels, July 6–7, 2011.
37. Isabel Kershner, "9 Things to Know About Jerusalem as U.S. Embassy Opens," *The New York Times*, May 13, 2018, <https://www.nytimes.com/2018/05/13/world/middleeast/israel-jerusalem-us-embassy.html> (accessed May 27, 2021).
38. *Peace to Prosperity: A Vision to Improve the Lives of the Palestinian and Israeli People*, The White House, January 2020, <https://trumpwhitehouse.archives.gov/wp-content/uploads/2020/01/Peace-to-Prosperity-0120.pdf> (accessed May 27, 2021).
39. James Phillips, "Palestinians Miss Opportunity by Rejecting Trump Peace Plan," Heritage Foundation *Commentary*, January 31, 2020, <https://www.heritage.org/middle-east/commentary/palestinians-miss-opportunity-rejecting-trump-peace-plan>.
40. The GCC was founded in 1981 to offset the threat from Iran, which became hostile to Sunni-led Arab states after its 1979 revolution.
41. Declan Walsh, "Rare Protests Against Egypt's Leader Erupt in Cairo and Elsewhere," *The New York Times*, September 20, 2019, <https://www.nytimes.com/2019/09/20/world/middleeast/anti-government-protests-egypt.html> (accessed May 27, 2021), and Vivian Yee and Nada Rashwan, "Egypt's Harsh Crackdown Quashes Protest Movement," *The New York Times*, October 4, 2019, <https://www.nytimes.com/2019/10/04/world/middleeast/egypt-protest-sisi-arrests.html> (accessed May 27, 2021).
42. 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. 12, https://sipri.org/sites/default/files/2021-04/fs_2104_milex_0.pdf (accessed May 27, 2021).
43. *Ibid.*, p. 9, which specifies that the "[c]ountries included in the estimate are Bahrain, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Saudi Arabia and Turkey."
44. Nazila Fathi, "Wipe Israel 'Off the Map' Iranian Says," *The New York Times*, October 27, 2005, http://www.nytimes.com/2005/10/26/world/africa/26iht-iran.html?_r=0 (accessed May 27, 2021).
45. *Ibid.*
46. The embargo "limited all U.N. member states from selling weaponry—including battle tanks, armored combat vehicles, large caliber artillery systems, combat aircraft, attack helicopters, warships, missiles or missile systems and spare parts—to the Islamic Republic." United States Institute of Peace, "U.S. on U.N. Arms Embargo," *The Iran Primer*, updated October 21, 2020, <https://iranprimer.usip.org/blog/2020/may/11/part-1-us-arms-embargo> (accessed May 27, 2021), and Nasser Karimi, "UN Arms Embargo on Iran Expires," *Defense News*, October 19, 2020, <https://www.defensenews.com/global/mideast-africa/2020/10/19/un-arms-embargoes-on-iran-expires/> (accessed May 27, 2021).
47. Jewish Institute for National Security of America, Gemunder Center U.S.–Israel Security Policy Project, "Arming Israel to Defeat Iranian Aggression: Frontloading Weapons Delivery," November 2019, <https://jinsa.org/wp-content/uploads/2019/11/Arming-Israel-to-Defeat-Iranian-Aggression-1.pdf> (accessed May 27, 2021).
48. T. S. Allen, "Here Is How Israel's Military Dominates the Battlefield," *The National Interest*, The Buzz Blog, February 27, 2018, <http://nationalinterest.org/blog/the-buzz/here-how-israels-military-dominates-the-battlefield-24679> (accessed May 27, 2021).
49. See, for example, Gil Press, "6 Reasons Israel Became a Cybersecurity Powerhouse Leading the \$82 Billion Industry," *Forbes*, July 18, 2017, <https://www.forbes.com/sites/gilpress/2017/07/18/6-reasons-israel-became-a-cybersecurity-powerhouse-leading-the-82-billion-industry/#d458614420aa> (accessed May 27, 2021), and "Israel Is a Small Country, but a Cyber Superpower, Says Ex-CIA Director at CyberTech 2018," NoCamels, January 20, 2018, <http://nocamels.com/2018/01/israel-cyber-superpower-cia-cybertech-2018/> (accessed May 27, 2021).
50. Lynn Adler and Jim Wolf, "Update 1—Israel, U.S. Sign \$2.75 Billion F-35 Deal," Reuters, October 7, 2010, <https://www.reuters.com/article/israel-usa-f-35-idUSN071986420101008> (accessed May 27, 2021), and "Adir Who? Israel's F-35i Stealth Fighters," *Defense Industry Daily*, May 5, 2021, <https://www.defenseindustrydaily.com/israel-plans-to-buy-over-100-f35s-02381/> (accessed May 28, 2021).

51. Judah Ari Gross, "IDF Says It Launched Major Offensive on Dozens of Rocket Launch Tubes in Gaza," *The Times of Israel*, May 11, 2021, https://www.timesofisrael.com/liveblog_entry/idf-says-it-launched-major-offensive-on-dozens-of-rocket-launch-tubes-in-gaza/ (accessed May 27, 2021).
52. International Institute for Strategic Studies, *The Military Balance 2021: The Annual Assessment of Global Military Capabilities and Defence Economics* (London: Routledge, 2021), pp. 363–364.
53. News release, "Lockheed Martin Awarded Contract to Build F-16 Block 70 Aircraft for Bahrain," Lockheed Martin, June 25, 2018, https://news.lockheedmartin.com/2018-06-25-Lockheed-Martin-Awarded-Contract-to-Build-F-16-Block-70-Aircraft-for-Bahrain?_ga=2.3223408.1543096780.1588692655-1467716092.1546629521 (accessed May 27, 2021).
54. Reuters, "Qatar Goes Ahead with \$6.7 Billion Typhoon Combat Jets Deal with UK's BAE Systems," December 10, 2017, <https://www.reuters.com/article/us-britain-qatar-typhoons/qatar-goes-ahead-with-6-7-billion-typhoon-combat-jets-deal-with-uks-bae-systems-idUSKBNIE40QM> (accessed May 27, 2021).
55. James Phillips, Nicole Robinson, and John Venable, "F-35 Sale to UAE Advances U.S. Security Interests," Heritage Foundation *Issue Brief* No. 6032, December 10, 2020, <https://www.heritage.org/defense/report/f-35-sale-uae-advances-us-security-interests>.
56. U.S. Naval Forces Central Command, Combined Maritime Forces—U.S. 5th Fleet, "Combined Maritime Forces," <https://www.cusnc.navy.mil/Combined-Maritime-Forces/> (accessed May 27, 2021).
57. Helene Cooper and Anne Barnard, "Jordan and Emirates Carry out Airstrikes in Syria Against ISIS," *The New York Times*, February 10, 2015, www.nytimes.com/2015/02/11/world/middleeast/united-arab-emirates-resume-airstrikes-against-isis.html (accessed May 27, 2021).
58. International Institute for Strategic Studies, *The Military Balance 2021*, p. 334.
59. GlobalSecurity.org, "Egypt Military Guide: Introduction," last modified April 4, 2012, <http://www.globalsecurity.org/military/world/egypt/intro.htm> (accessed May 27, 2021).
60. Reuters and Jack Khoury, "Isis Claims Responsibility for Attack That Killed 15 Egyptian Military Personnel," *Haaretz*, February 16, 2019, <https://www.haaretz.com/middle-east-news/egypt/15-egyptian-military-personnel-killed-or-wounded-in-sinai-attack-army-says-1.6938947> (accessed May 27, 2021), and Jason Hanna, Michael Martinez, and Jennifer Deaton, "ISIS Publishes Photo of What It Says Is Bomb that Downed Russian Plane," CNN, updated November 19, 2015, <https://www.cnn.com/2015/11/18/middleeast/metrojet-crash-dabiq-claim/index.html> (accessed May 27, 2021).
61. International Institute for Strategic Studies, *The Military Balance 2021*, pp. 347–348.
62. See, for example, Florence Gaub, "An Unhappy Marriage: Civil–Military Relations in Post-Saddam Iraq," Carnegie Endowment for International Peace, Carnegie Middle East Center, January 13, 2016, <https://carnegieendowment.org/files/ACMR-Gaub-final.pdf> (accessed May 27, 2021).
63. Reuters, "Iraq Says It Found 50,000 'Ghost Soldiers' on Payroll," December 1, 2014, <https://www.reuters.com/article/us-mideast-crisis-iraq-soldiers-idUSKCN0JF2RZ20141201> (accessed May 27, 2021).
64. Alissa J. Rubin, "Iraq Chooses New Prime Minister, an Ex-Intelligence Chief Backed by U.S.," *The New York Times*, May 6, 2020, <https://www.nytimes.com/2020/05/06/world/middleeast/iraq-prime-minister-mustafa-khadimi.html> (accessed May 27, 2021), and Maya Gebeilly, "Ex-Spy Chief Becomes Iraq PM Amid Fiscal, Virus Crises," *Barron's*, May 6, 2020, <https://www.barrons.com/news/iraq-gets-new-government-amid-fiscal-coronavirus-crises-01588805403?tesla=y> (accessed May 27, 2021).
65. Ned Parker, Isabel Coles, and Raheem Salman, "Special Report: How Mosul Fell—An Iraqi General Disputes Baghdad's Story," Reuters, October 14, 2014, <https://www.reuters.com/article/us-mideast-crisis-gharawi-special-report/special-report-how-mosul-fell-an-iraqi-general-disputes-baghdads-story-idUSKCN0I30Z820141014> (accessed May 27, 2021).
66. Tim Arango and Michael R. Gordon, "Iraqi Prime Minister Arrives in Mosul to Declare Victory over ISIS," *The New York Times*, July 9, 2017, <https://www.nytimes.com/2017/07/09/world/middleeast/mosul-isis-liberated.html> (accessed May 27, 2021).
67. During 1967 and 1990, South Yemen, officially known as the People's Democratic Republic of Yemen, was a socialist state in the southeastern provinces of the present-day Republic of Yemen.
68. U.S. Central Command, "About Us: U.S. Central Command History," <https://www.centcom.mil/ABOUT-US/> (accessed May 27, 2021).
69. Ibid.
70. Lieutenant Colonel Joseph P. Englehardt, *Desert Shield and Desert Storm: A Chronology and Troop List for the 1990–1991 Persian Gulf Crisis*, U.S. Army War College, Strategic Studies Institute *Special Report* AD-A234 743, March 25, 1991, p. 5, <https://apps.dtic.mil/dtic/tr/fulltext/u2/a234743.pdf> (accessed May 27, 2021).
71. Associated Press, "A Timeline of Iraq War, Troop Levels," Internet Archive, updated May 25, 2011, https://web.archive.org/web/20141023033147/http://www.huffingtonpost.com/2008/04/07/a-timeline-of-iraq-war-tr_n_95534.html (accessed May 27, 2021).

72. BBC News, "Iraq War in Figures," December 14, 2011, <http://www.bbc.com/news/world-middle-east-11107739> (accessed May 27, 2021).
73. Reuters, "Timeline: Invasion, Surge, Withdrawal; U.S. Forces in Iraq," December 18, 2011, <https://www.reuters.com/article/us-iraq-usa-pullout/timeline-invasion-surge-withdrawal-u-s-forces-in-iraq-idUSTRE7BH08E20111218> (accessed May 27, 2021).
74. Christopher M. Blanchard, "Iraq and U.S. Policy," Congressional Research Service *In Focus* No. 10404, updated April 9, 2020, <https://crsreports.congress.gov/product/pdf/IF/IF10404/26> (accessed May 28, 2021).
75. Christopher M. Blanchard, "Iraq and U.S. Policy," Congressional Research Service *In Focus* No. 10404, updated December 6, 2020, <https://crsreports.congress.gov/product/pdf/IF/IF10404> (accessed May 28, 2021).
76. Gordon Lubold and Michael C. Bender, "U.S. to Remove Patriot Missile Batteries from Saudi Arabia," *The Wall Street Journal*, updated May 7, 2020, <https://www.wsj.com/articles/u-s-to-remove-patriot-missile-batteries-from-saudi-arabia-11588867916> (accessed May 27, 2021).
77. Kenneth Katzman, Kathleen J. McInnis, and Clayton Thomas, "U.S.–Iran Conflict and Implications for U.S. Policy," Congressional Research Service *Report for Members and Committees of Congress* No. R45795, updated May 8, 2020, p. 13, <https://fas.org/sgp/crs/mideast/R45795.pdf> (accessed May 27, 2021).
78. Matthew Wallin, "U.S. Bases and Military Facilities in the Middle East," American Security Project *Fact Sheet*, June 2018, <https://www.americansecurityproject.org/wp-content/uploads/2018/07/Ref-0213-US-Military-Bases-and-Facilities-Middle-East.pdf> (accessed May 27, 2021).
79. Kenneth Katzman, "Kuwait: Governance, Security, and U.S. Policy," Congressional Research Service *Report for Members and Committees of Congress* No. RS21513, updated December May 12, 2021, pp. 8–11, <https://fas.org/sgp/crs/mideast/RS21513.pdf> (accessed May 27, 2021).
80. Kenneth Katzman, "The United Arab Emirates (UAE): Issues for U.S. Policy," Congressional Research Service *Report for Members and Committees of Congress* No. RS21852, updated April 15, 2021, pp. 16–18, <https://crsreports.congress.gov/product/pdf/RS/RS21852> (accessed May 27, 2021).
81. Kenneth Katzman, "Oman: Politics, Security, and U.S. Policy," Congressional Research Service *Report for Members and Committees of Congress* No. RS21534, updated May 19, 2021, p. 14, <https://crsreports.congress.gov/product/pdf/RS/RS21534> (accessed May 27, 2021).
82. Kenneth Katzman, "Bahrain: Unrest, Security, and U.S. Policy," Congressional Research Service *Report for Members and Committees of Congress* No. RS95-1013, updated April 20, 2021, pp. 11–15, <https://crsreports.congress.gov/product/pdf/RS/95-1013> (accessed May 27, 2021).
83. Press release, "DOD Statement on Deployment of Additional U.S. Forces and Equipment to the Kingdom of Saudi Arabia," U.S. Department of Defense, October 11, 2019, <https://www.defense.gov/Newsroom/Releases/Release/Article/1987575/dod-statement-on-deployment-of-additional-us-forces-and-equipment-to-the-kingdom/> (accessed May 13, 2021).
84. Lubold and Bender, "U.S. to Remove Patriot Missile Batteries from Saudi Arabia."
85. Captain Marie Harnley, "Wing Leadership Visits Eskan Village," U.S. Air Forces Central Command, July 5, 2013, <http://www.afcent.af.mil/Units/379thAirExpeditionaryWing/News/Display/tabid/5382/Article/350180/wing-leadership-visits-eskan-village.aspx> (accessed May 13, 2021).
86. Kenneth Katzman, "Qatar: Governance, Security, and U.S. Policy," Congressional Research Service *Report for Members and Committees of Congress*, April 7, 2021, pp.13-14, <https://crsreports.congress.gov/product/pdf/R/R44533> (accessed May 13, 2021).
87. U.S. Army Central, "Eager Lion," STAND-TO! The Official Focus of the U.S. Army, April 11, 2018, <https://www.army.mil/standto/2018-04-11> (accessed May 27, 2021).
88. Jeremy M. Sharp, "Jordan: Background and U.S. Relations," Congressional Research Service *Report for Members and Committees of Congress* No. RL33546, updated June 18, 2020, p. 10, <https://crsreports.congress.gov/product/pdf/RL/RL33546> (accessed May 27, 2021), quoting "President Trump's June 2020 War Powers Resolution Report to Congress."
89. U.S. Central Command, "About Us: CENTCOM Mission and Command Priorities," <https://www.centcom.mil/ABOUT-US/> (accessed May 27, 2021).
90. Louisa Brook-Holland, "UK Forces in the Middle East Region," House of Commons Library *Briefing Paper* No. 08794, January 14, 2020, p. 2, <https://researchbriefings.files.parliament.uk/documents/CBP-8794/CBP-8794.pdf> (accessed May 27, 2021).
91. *Ibid.*, p. 3.
92. Malak Harb, "U.K. Opens Persian Gulf Military Base in Bahrain," Associated Press, April 5, 2018, <https://apnews.com/article/403eea90b7054edaa978c0e51fd182c4> (accessed May 27, 2021).

93. U.K. Ministry of Defence and The Rt. Hon. Sir Michael Fallon, MP, "Multi-Million Pound Joint Venture Announced Between Britain and Oman," March 30, 2016, <https://www.gov.uk/government/news/multi-million-pound-joint-venture-announced-between-britain-and-oman> (accessed May 27, 2021).
94. Frank Gardner, "'East of Suez': Are UK Forces Returning?" BBC News, April 29, 2013, <http://www.bbc.com/news/uk-22333555> (accessed May 27, 2021).
95. Harriet Alexander, "Where Are the World's Major Military Bases?" *The Telegraph*, July 11, 2013, <http://www.telegraph.co.uk/news/uknews/defence/10173740/Where-are-the-worlds-major-military-bases.html> (accessed May 27, 2021).
96. Government of France, Ministry for Europe and Foreign Affairs, "Country Files: United Arab Emirates," updated May 14, 2019, <https://www.diplomatie.gouv.fr/en/country-files/united-arab-emirates/#> (accessed May 27, 2021), and International Institute for Strategic Studies, *The Military Balance 2021*, p. 348.
97. Shawn Snow, "Training in Iraq Halted, Smaller Bases Consolidating[,] Some Coalition Troops Homeward Bound over COVID-19 Concerns," *Military Times*, March 20, 2020, <https://www.militarytimes.com/flashpoints/2020/03/20/training-in-iraq-halted-smaller-bases-consolidating-some-coalition-troops-homeward-bound-over-covid-19-concerns/> (accessed May 27, 2021), and Associated Press, "France Pulls out Military Forces in Iraq amid Virus Demands," March 25, 2020, <https://apnews.com/77a45e7c9a6fb44d6e19c90f9a8ad2c6> (accessed May 27, 2021).
98. French Defense Attaché Office, Washington D.C., "French Armed Forces Update," February 2021, https://franceintheus.org/IMG/pdf/FAFU/FAFU_007b.pdf (accessed May 27, 2021).
99. James Hirst, "UK to Increase Military Training Presence in Iraq," Forces.Net, February 18, 2021, <https://www.forces.net/news/iraq/uk-increase-military-training-presence-iraq> (accessed May 27, 2021).
100. U.S. Department of Energy, Energy Information Administration, "Today in Energy: The Bab el-Mandeb Strait Is a Strategic Route for Oil and Natural Gas Shipments," August 27, 2019, <https://www.eia.gov/todayinenergy/detail.php?id=41073> (accessed May 27, 2021).
101. U.S. Navy, Commander, Navy Installations Command, "Welcome to Camp Lemonnier, Djibouti: Installation Information," https://www.cnic.navy.mil/regions/cnreurfacent/installations/camp_lemonnier_djibouti.html (accessed May 27, 2021).
102. Associated Press, "The New Military Powerhouse on the Red Sea: Tiny Djibouti," *Haaretz*, April 10, 2018, <https://www.haaretz.com/middle-east-news/the-new-military-powerhouse-on-the-red-sea-tiny-djibouti-1.5990505> (accessed May 27, 2021).
103. Donna Miles, "Centcom Undertakes Massive Logistical Drawdown in Afghanistan," Armed Forces Press Service, June 21, 2013, in Defense Acquisition University, *Defense AT&L In the News*, September–October 2013, pp. 6–9, <https://www.dau.edu/library/defense-atl/DATLFiles/Sep-Oct2013/In%20the%20News.pdf> (accessed May 27, 2021).
104. U.S. Central Intelligence Agency, "Country Comparisons—Roadways," in *The World Factbook 2018*, <https://www.cia.gov/the-world-factbook/field/roadways/country-comparison/> (accessed May 26, 2021).
105. Katzman, "Bahrain: Unrest, Security, and U.S. Policy," pp. 17–18, and Katzman, "The United Arab Emirates (UAE): Issues for U.S. Policy," p. 19.
106. Katzman, "The United Arab Emirates (UAE): Issues for U.S. Policy," p. 18.
107. Katzman, "Oman: Politics, Security, and U.S. Policy," p. 15.
108. Theo Leggett, "Analysis," in BBC News, "Egypt's Suez Canal Blocked by Huge Container Ship," March 24, 2021, <https://www.bbc.com/news/world-middle-east-56505413#:~:text=The%20ship%20has%20the%20capacity,of%2051.5%20ships%20per%20day> (accessed May 26, 2021).
109. Michael Wahid Hanna, "Getting over Egypt: Time to Rethink Relations," *Foreign Affairs*, November/December 2015, <https://www.foreignaffairs.com/articles/egypt/getting-over-egypt> (accessed May 26, 2021).
110. Associated Press, "US Carrier Crosses Suez Canal into Red Sea," *The Times of Israel*, November 8, 2013, <http://www.timesofisrael.com/us-carrier-crosses-suez-canal-into-red-sea/> (accessed May 26, 2021).
111. Brent Sadler, "What the Closing of the Suez Canal Says About U.S. Maritime Security," Heritage Foundation *Commentary*, April 12, 2021, <https://www.heritage.org/defense/commentary/what-the-closing-the-suez-canal-says-about-us-maritime-security>.
112. U.S. Department of Energy, 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 1, 2021).
113. Janae Diaz and James Di Pane, "Iran Is Targeting the Strait of Hormuz. The World Needs to Take Heed," Heritage Foundation *Commentary*, October 22, 2020, <https://www.heritage.org/middle-east/commentary/iran-targeting-the-strait-hormuz-the-world-needs-take-heed>.

114. U.S. Department of Energy, Energy Information Administration, "Today in Energy: Three Important Oil Trade Chokepoints Are Located Around the Arabian Peninsula," August 4, 2017, <https://www.eia.gov/todayinenergy/detail.php?id=32352> (accessed May 26, 2021).
115. Seth J. Frantzman, "Is Iran's Influence in Iraq Growing, or Has It Reached a Plateau?" *The Jerusalem Post*, January 2, 2019, <https://www.jpost.com/Middle-East/Is-Irans-influence-in-Iraq-growing-or-has-it-reached-a-plateau-576104> (accessed May 26, 2021).
116. See, for example, World Bank, "Logistics Performance Index: Quality of Trade and Transport-Related Infrastructure (1=Low to 5=High)," 2007–2018, <https://data.worldbank.org/indicator/lp.lpi.infr.xq> (accessed May 26, 2021).

Asia

Jeff Smith, Dean Cheng, Bruce Klingner, and Walter Lohman

Ever since the founding of the American Republic, Asia has been a key U.S. area of interest for both economic and security reasons. One of the first ships to sail under an American flag was the aptly named *Empress of China*, which inaugurated America's participation in the lucrative China trade in 1784. In the more than 235 years since then, the United States has held to the strategic assumption that allowing any single nation to dominate Asia would be inimical to American interests. Asia is too important a market and too great a source of key resources for the United States to be denied access. Thus, beginning with U.S. Secretary of State John Hay's "Open Door" policy toward China in the 19th century, the United States has worked to prevent the rise of a regional hegemon in Asia, whether it was imperial Japan or the Soviet Union.

In the 21st century, Asia's importance to the United States will continue to grow. Asia is a key source of vital natural resources and a crucial part of the global value chain in areas like electronic components. As of March 2021, seven of America's top 15 trading partners were found in Asia:

- China (third);
- Japan (fourth);
- South Korea (sixth);
- Vietnam (eighth);

- India (ninth);
- Taiwan (11th); and
- Malaysia (14th).¹

Disruption in Asia can affect the production of goods like cars, aircraft, and computers around the world as well as the global financial system. The COVID-19 pandemic that originated in China and swept through the world in 2020, for example, has wreaked havoc on the global economy, disrupting supply chains and defense budgets across the region, and has led to the cancellation of several series of military exercises.

Asia is of more than just economic concern, however. Several of the world's largest militaries are in Asia, including those of China, India, North and South Korea, Pakistan, Russia, and Vietnam. The United States also maintains a network of treaty alliances and security partnerships, as well as a significant military presence, in Asia, and five Asian states (China, North Korea, India, Pakistan, and Russia) possess nuclear weapons.

The region is a focus of American security concerns both because of the presence of substantial military forces and because of its legacy of conflict. Both of the two major "hot" wars fought by the United States during the Cold War (Korea and Vietnam) were fought in Asia. Moreover, the Asian security environment is unstable. For one thing, the Cold War has not ended in Asia. Of the four states divided

between Communism and democracy by the Cold War, three (China, Korea, and Vietnam) are in Asia. Neither the Korean situation nor the China–Taiwan situation was resolved despite the fall of the Berlin Wall and the collapse of the Soviet Union.

The Cold War itself was an ideological conflict layered atop long-standing—and still lingering—historical animosities. Asia is home to several major territorial disputes, among them:

- Northern Territories/Southern Kurils (Japan and Russia);
- Senkakus/Diaoyutai/Diaoyu Dao (Japan, China, and Taiwan);
- Dok-do/Takeshima (Korea and Japan);
- Paracels/Xisha Islands (Vietnam, China, and Taiwan);
- Spratlys/Nansha Islands (China, Taiwan, Vietnam, Brunei, Malaysia, and the Philippines);
- Kashmir (India and Pakistan); and
- Aksai Chin and parts of the Indian state of Arunachal Pradesh (India and China).

Even the various names applied to the disputed territories reflect fundamental differences in point of view, as each state uses different names when referring to the disputed areas. Similarly, different names are applied to the various major bodies of water: for example, “East Sea” or “Sea of Japan” and “Yellow Sea” or “West Sea.” China and India do not even agree on the length of their disputed border, with Chinese estimates as low as 2,000 kilometers and Indian estimates generally in the mid-3,000s.

These disputes over names also reflect the broader tensions rooted in historical animosities that still scar the region. Most notably, Japan’s actions leading up to and during World

War II remain a major source of controversy, particularly in China and South Korea where debates over issues such as what should be incorporated in textbooks and governmental statements prevent old wounds from healing. Similarly, a Chinese claim that much of the Korean Peninsula was once Chinese territory aroused reactions in both Koreas. The end of the Cold War did little to resolve any of these underlying disagreements.

It is in this light and in light of the reluctance of many states in the region to align with great powers that one should consider the lack of a political–security architecture. There is no Asian equivalent of NATO despite an ultimately failed mid-20th century effort to forge a parallel multilateral security architecture through the Southeast Asia Treaty Organization (SEATO). Regional security entities like the Five Power Defense Arrangement (involving the United Kingdom, Australia, New Zealand, Malaysia, and Singapore in an “arrangement” rather than an alliance) or discussion forums like the ASEAN Regional Forum (ARF) and groupings like the ASEAN Defence Ministers Meeting-Plus (ADMM-Plus) have been far weaker. There also is no Asian equivalent of the Warsaw Pact.

Instead, Asian security has been marked by a combination of bilateral alliances, mostly centered on the United States, and individual nations’ efforts to maintain their own security. In recent years, these core aspects of the regional security architecture have been supplemented by “minilateral” consultations like the U.S.–Japan–Australia and India–Japan–Australia trilaterals and the U.S.–Japan–Australia–India quadrilateral security dialogue popularly known as “the Quad.”

Nor is Asia undergirded by any significant economic architecture. Despite substantial trade and expanding value chains among the various Asian states, as well as with the rest of the world, formal economic integration is limited. There is no counterpart to the European Union or even to the European Economic Community, just as there is no parallel with the European Coal and Steel Community, the precursor to European economic integration.

The Association of Southeast Asian Nations (ASEAN) is a far looser agglomeration of disparate states, although they have succeeded in expanding economic linkages among themselves over the past 50 years through a range of economic agreements like the ASEAN Free Trade Area (AFTA). Less important to regional stability has been the South Asia Association of Regional Cooperation (SAARC), which includes Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka. The SAARC is largely ineffective, both because of the lack of regional economic integration and because of the historical rivalry between India and Pakistan.

With regard to Asia-wide free trade agreements, the 11 countries remaining in the Trans-Pacific Partnership (TPP) after U.S. withdrawal subsequently modified and signed it. The Regional Comprehensive Economic Partnership—the ASEAN-centric agreement that includes China, Japan, South Korea, India, Australia, and New Zealand—has gone through 25 rounds of negotiations. When fully implemented, these agreements will help to remedy the lack of regional economic integration.

Important Alliances and Bilateral Relations in Asia

The keys to America's position in the Western Pacific are its alliances with Japan, the Republic of Korea (ROK), the Philippines, Thailand, and Australia, supplemented by very close security relationships with New Zealand and Singapore, an emerging strategic partnership with India, and evolving relationships with regional partners in Southeast Asia like Vietnam, Malaysia, and Indonesia. The U.S. also has a robust unofficial relationship with Taiwan. In South Asia, American relationships with Afghanistan and Pakistan are critical to regional peace and security.

The United States also benefits from the interoperability gained from sharing common weapons and systems with many of its allies. Many nations, for example, have equipped their ground forces with M-16/M-4–based infantry weapons and share the same 5.56 mm

ammunition; they also field F-15 and F-16 combat aircraft and employ LINK-16 data links among their naval forces. Australia, Japan, and South Korea are partners in production of the F-35 Joint Strike Fighter; Australia and Japan have already taken delivery of aircraft, and South Korea is due to take delivery soon. Partners like India and Australia operate American-made P-8 maritime surveillance aircraft and C-17 transport aircraft.

Consequently, in the event of conflict, the region's various air, naval, and even land forces would be able to share information in such key areas as air defense and maritime domain awareness. This advantage is further expanded by the constant ongoing range of both bilateral and multilateral exercises, which acclimate various forces to operating together and familiarize both American and local commanders with each other's standard operating procedures (SOPs), as well as training, tactics, and (in some cases) war plans. In addition, "enabling" military agreements allow the United States and several of its regional partners to access each other's military facilities, share intelligence and encrypted communications and equipment, and refuel each other's warships at sea.

While it does not constitute a formal alliance, in November 2017, Australia, Japan, India, and the U.S. reconstituted the Quad. Officials from the four countries agreed to meet in the quadrilateral format twice a year to discuss ways to strengthen strategic cooperation and combat common threats. In 2019, the group held its first meeting at the ministerial level and added a counterterrorism tabletop exercise to its agenda. In 2020, officials from the four countries participated in a series of conference calls to discuss responses to the COVID-19 pandemic that also included government representatives from New Zealand, South Korea, and Vietnam. In 2021, the leaders of the four nations held a virtual summit, marking a new level of interaction.

Japan. The U.S.–Japan defense relationship is the linchpin of America's network of relations in the Western Pacific. The U.S.–Japan

Treaty of Mutual Cooperation and Security, signed in 1960, provides for a deep alliance between two of the world's largest economies and most sophisticated military establishments. Changes in Japanese defense policies are now enabling an even greater level of cooperation on security issues, both between the two allies and with other countries in the region.

Since the end of World War II, Japan's defense policy has been distinguished by Article 9 of the Japanese constitution, which states in part that "the Japanese people forever renounce war as a sovereign right of the nation and the threat or use of force as means of settling international disputes."² In effect, this article prohibits the use of force by Japan's governments as an instrument of national policy. It also has led to several other associated policies.

One such policy was a prohibition against "collective self-defense." Japan recognized that nations have a right to employ their armed forces to help other states defend themselves (i.e., to engage in collective defensive operations) but rejected that policy for itself: Japan would employ its forces only in defense of Japan. This changed in 2015. The U.S. and Japan revised their defense cooperation guidelines, and the Japanese passed legislation that enables their military to exercise limited collective self-defense in certain cases involving threats to both the U.S. and Japan, as well as in multilateral peacekeeping operations.

In recent years, Japan has increased its security cooperation with other Indo-Pacific democracies. This has included enhancing security agreements, participating in more multilateral military exercises, and providing ships to Southeast Asian coast guard forces.

Tokyo relies heavily on the United States for its security. In particular, it depends on the United States to deter both conventional and nuclear attacks on the home islands. The combination of the pacifist constitution and Japan's past (the atomic bombings of Hiroshima and Nagasaki, which ended World War II in the Pacific) has forestalled much public interest in obtaining an independent nuclear

deterrent. Similarly, throughout the Cold War, Japan relied on America's conventional and nuclear commitment to deter Soviet and Chinese aggression.

As part of its relationship with Japan, the United States maintains some 54,000 military personnel and another 8,000 Department of Defense (DOD) civilian employees in Japan under the rubric of U.S. Forces Japan (USFJ).³ These forces include, among other things, a forward-deployed carrier battle group centered on the USS *Ronald Reagan*; an amphibious ready group at Sasebo centered on the LHA-6 *America*, an aviation-optimized amphibious assault ship; and the bulk of the Third Marine Expeditionary Force (III MEF) on Okinawa. U.S. forces exercise regularly with their Japanese counterparts, and this collaboration has expanded in recent years from air and naval exercises to include joint amphibious exercises.

The American presence is supported by a substantial American defense infrastructure throughout Japan, including Okinawa. These major bases provide key logistical and communications support for U.S. operations throughout the Western Pacific, cutting travel time substantially compared with deployments from Hawaii or the West Coast of the United States. They also provide key listening posts with which to monitor Russian, Chinese, and North Korean military operations. This capability is supplemented by Japan's growing array of space systems, including new reconnaissance satellites.

The Japanese government "pays roughly \$2 billion per year to defray the cost of stationing U.S. military personnel in Japan."⁴ These funds cover approximately 75 percent of the cost of deployed U.S. forces,⁵ including utility and labor costs at U.S. bases, improvements to U.S. facilities in Japan, and the cost of relocating training exercises away from populated areas in Japan. Japan paid nearly all of the cost of new U.S. military facilities at Futenma and Iwakuni, as well as a third of the cost of new facilities in Guam. Japan purchases 90 percent of its weapons and defense systems from the United States.⁶

During bilateral Special Measures Agreement negotiations, the Trump Administration sought a 400 percent increase in Japanese contributions for remuneration above the cost of stationing U.S. troops in Japan. In April 2021, the Biden Administration signed a one-year extension of the existing agreement, freezing Japanese contributions at the current level, to allow for continued negotiations.

The United States has long sought to expand Japanese participation in international security affairs. Japan's political system, grounded in the country's constitution, legal decisions, and popular attitudes, has generally resisted this effort. Similarly, attempts to expand Japan's range of defense activities, especially away from the home islands, have often been vehemently opposed by Japan's neighbors, especially China and South Korea, because of unresolved differences on issues ranging from territorial claims and boundaries to historical grievances, including visits by Japanese leaders to the Yasukuni Shrine, a controversial memorial to Japan's war dead that includes some who are deemed war criminals for their conduct in World War II. Even with the incremental changes allowing for broader Japanese defense contributions, these issues will doubtless continue to constrain Japan's contributions to the alliance.

These historical issues have been serious enough to torpedo efforts to improve defense cooperation between Seoul and Tokyo. South Korean–Japanese relations took a major downturn in 2018 when the South Korean Supreme Court ruled that Japanese companies could be forced to pay occupation reparations. In December 2018, an incident between a South Korean naval ship and Japanese air force plane further exacerbated tensions. Japan responded in July 2019 by imposing restrictions on exports to South Korea of three chemicals that are critical to the production of semiconductors and smartphones.⁷ Seoul then threatened to withdraw from the bilateral General Security of Military Information Agreement (GSOMIA), which enables the sharing of classified intelligence and military information on

the North Korean nuclear and missile threat. The Moon Jae-in administration relented and maintained the agreement, but there was public criticism of U.S. pressure.

Republic of Korea. The United States and the Republic of Korea signed their Mutual Defense Treaty in 1953. That treaty codified the relationship that had grown from the Korean War, when the United States dispatched troops to help South Korea defend itself against invasion by Communist North Korea. Since then, the two states have forged an enduring alliance supplemented by a substantial trade and economic relationship that includes a free trade agreement.

The U.S. is committed to maintaining 28,500 troops on the Korean Peninsula. This presence is centered mainly on the U.S. 2nd Infantry Division, rotating brigade combat teams, and a significant number of combat aircraft.

The U.S.–ROK defense relationship involves one of the more integrated and complex command-and-control structures. A United Nations Command (UNC) established in 1950 was the basis for the American intervention and remained in place after the armistice was signed in 1953. UNC has access to a number of bases in Japan to support U.N. forces in Korea. In concrete terms, however, it oversaw only South Korean and American forces as other nations' contributions were gradually withdrawn or reduced to token elements.

In 1978, operational control of frontline South Korean and American military forces passed from UNC to Combined Forces Command (CFC). Headed by the American Commander of U.S. Forces Korea, who is also Commander, U.N. Command, CFC reflects an unparalleled degree of U.S.–South Korean military integration. Similarly, the system of Korean Augmentees to the United States Army (KATUSA), which places South Korean soldiers into American units assigned to Korea, allows for an atypical degree of tactical-level integration and cooperation.

Under current command arrangements for the U.S. and ROK militaries, CFC would exercise operational control (OPCON) of all forces

on the peninsula in time of war; peacetime control rests with respective national authorities, although the U.S. exercises peacetime OPCON over non-U.S., non-ROK forces located on the peninsula.

In 2003, South Korean President Roh Moo-hyun, as agreed with the U.S., began to transfer wartime operational control from CFC to South Korean commanders, thereby establishing the ROK military as fully independent of the United States. This decision engendered significant opposition within South Korea and raised serious military questions about the transfer's impact on unity of command. Faced with various North Korean provocations, including a spate of missile tests as well as attacks on South Korean military forces and territory in 2010, Washington and Seoul agreed in late 2014 to postpone wartime OPCON transfer and adopt a conditions-based rather than timeline-based policy. President Moon Jae-in has advocated for an expedited OPCON transition before the end of his administration in 2021, but critical prerequisite conditions, including improvement in South Korean forces and a decrease in North Korea's nuclear program, have yet to be met.⁸

The domestic political constraints under which South Korea's military operates are less stringent than those that govern the operations of the Japanese military. South Korea has fought alongside the United States in every conflict since the Korean War. Seoul sent 300,000 troops to the Vietnam War, and 5,000 of its soldiers were killed. At one point, it fielded the third-largest troop contingent in Iraq after the United States and Britain. It also has conducted anti-piracy operations off the coast of Somalia and has participated in peacekeeping operations in Afghanistan, East Timor, and elsewhere.

South Korean defense planning remains focused on North Korea, especially as Pyongyang has deployed its forces in ways that optimize a southward advance and has carried out several penetrations of ROK territory by ship, submarine, commandos, and drones. The sinking of

the South Korean frigate *Cheonan* and shelling of Yongpyeong-do in 2010, which together killed 48 military personnel, wounded 16, and killed two civilians, have only heightened concerns about North Korea.

Over the past several decades, the American presence on the peninsula has slowly declined. In the early 1970s, President Richard Nixon withdrew the 7th Infantry Division, leaving only the 2nd Infantry Division on the peninsula. Those forces have been positioned farther back so that there are now few Americans deployed on the Demilitarized Zone (DMZ).

Traditionally, U.S. military forces have engaged regularly in major exercises with their ROK counterparts, including the Key Resolve and Foal Eagle series, both of which involved the deployment of substantial numbers of forces and were intended partly to deter Pyongyang as well as to give U.S. and ROK forces a chance to practice operating together. However, after the 2018 U.S.–North Korean Summit, President Donald Trump announced unilaterally that he was cancelling major bilateral military exercises because he thought they were provocative and expensive.⁹ This decision was made without consulting the DOD, U.S. Forces Korea, or allies South Korea and Japan. During the next two years, the U.S. and South Korea cancelled numerous exercises and imposed constraints on additional exercises.

North Korea did not reciprocate with any diplomatic gesture or military constraints in response to the unilateral U.S. concession. The outbreak of COVID-19 in South Korea in 2020 led to additional curtailment of training activity, risking further degradation of allied deterrence and defense capabilities.

The ROK government provides substantial resources to defray the costs of U.S. Forces Korea. The bilateral, cost-sharing Special Measures Agreement has offset the non-personnel costs of stationing U.S. forces in South Korea since 1991 and is renegotiated every five years. In February 2019, South Korea agreed to increase its share of the cost to \$924 million, an increase of approximately 8 percent. Later in 2019, President Trump demanded a fivefold

increase of \$5 billion a year and threatened to reduce or remove U.S. forces from South Korea. In April 2021, the Biden Administration signed an agreement accepting an incremental increase in Seoul's contribution in line with previous agreements, defusing tensions within the alliance.

South Korea spends 2.6 percent of its gross domestic product (GDP) on defense—more than is spent by any European ally. Seoul absorbs costs not covered in the cost-sharing agreement, including paying \$10 billion, or 93 percent, of the cost of constructing Camp Humphreys, the largest U.S. base on foreign soil. During the past four years, South Korea has purchased \$13 billion in arms from the United States.¹⁰

The Philippines. America's oldest defense relationship in Asia is with the Philippines. The United States seized the Philippines from the Spanish more than a century ago as a result of the Spanish–American War and a subsequent conflict with Philippine indigenous forces. Unlike other colonial powers, however, the U.S. put in place a mechanism for the Philippines to gain its independence, transitioning through a period as a commonwealth until the archipelago received full independence in 1946. Just as important, substantial numbers of Filipinos fought alongside the United States against Japan in World War II, establishing a bond between the two peoples. Following World War II and after assisting the newly independent Filipino government against the Communist Hukbalahap movement in the 1940s, the United States and the Philippines signed a mutual defense treaty (MDT).

For much of the period between 1898 and the end of the Cold War, the largest American bases in the Pacific were in the Philippines, centered on the U.S. Navy base in Subic Bay and the complex of airfields that developed around Clark Field (later Clark Air Base). While the Philippines have never had the ability to provide substantial financial support for the American presence, the unparalleled base infrastructure provided replenishment and repair facilities and substantially extended

deployment periods throughout the East Asian littoral.

These bases, being reminders of the colonial era, were often centers of controversy. In 1991, a successor to the Military Bases Agreement between the U.S. and the Philippines was submitted to the Philippine Senate for ratification. After a lengthy debate, the Philippines rejected the treaty, thereby compelling American withdrawal from Philippine bases. Given the effects of the 1991 eruption of Mount Pinatubo, which devastated Clark Air Base and damaged many Subic Bay facilities, and the end of the Cold War, it was not felt that closure of the bases would fundamentally damage America's posture in the region.

Moreover, despite the closing of the American bases and consequent slashing of American military assistance, U.S.–Philippine military relations remained close, and assistance began to increase again after 9/11 as U.S. forces supported Philippine efforts to counter Islamic terrorist groups, including the Abu Sayyaf Group (ASG), in the South of the archipelago. From 2002–2015, the U.S. rotated 500–600 special operations forces regularly through the Philippines to assist in counterterrorism operations. That operation, Joint Special Operations Task Force–Philippines (JSOTF–P), ended during the first part of 2015.

The U.S. presence in Mindanao continued at a reduced level until the Trump Administration, alarmed by the terrorist threat there, began Operation Pacific Eagle–Philippines (OPE–P). The presence of 200–300 American advisers proved very valuable to the Philippines in its 2017 battle against Islamist insurgents in Marawi,¹¹ and these advisers remain there as part of a continuing advise-and-assist mission. The operation's final quarterly report describes its activities:

Through ISR support, U.S. forces aim to facilitate AFP and Philippines National Police (PNP) ground operations in areas with high concentrations of terrorist targets. This included helping the AFP develop six target packages. Of these,

the AFP took action against four targets on Mindanao and in the Sulu archipelago. U.S. military personnel conducted two advise and assist missions to help clear violent extremists in western Mindanao this quarter, conducted four subject matter exchanges, and assisted two local medical staffs with patient assessments and transfers, according to U.S. Special Operations Command-Pacific (SOCPAC).¹²

This on-the-ground assistance and other U.S. military activity have continued even though the future legal basis for the U.S. presence is uncertain. The Visiting Forces Agreement (VFA) that serves to operationalize the alliance was extended indefinitely in July 2021 with the retraction of the termination notice that President Duterte first issued in February 2000. It had been renewed on a six-month rolling basis. The VFA is now on stronger footing. It remains controversial in the Philippines, however, and could re-emerge as a political issue. The VFA is an instrument of the MDT. It comprises the procedures governing the deployment of U.S. forces and equipment to the Philippines. It also governs the application of domestic Philippine law to U.S. personnel, which is the most substantive part of the VFA and historically its most controversial.

The VFA undergirds approximately 280 U.S.–Philippine annual exercises. If it is terminated as scheduled, the arrangements for each of these exercises or groups of exercises will have to be negotiated individually. The U.S. conducts exercises with militaries throughout Southeast Asia on this basis, but not as many as it does with the Philippines. The loss of the VFA will slow their rate, condition their composition, and expose each element to political pressures in the Philippines. It will inhibit plans to implement base improvement and sharing arrangements under the 2014 U.S.–Philippine Enhanced Defense Cooperation Agreement (EDCA), and it will complicate situations in which the U.S. must respond quickly in collaboration with Philippine forces, as in the case of Marawi in 2017.

Beyond the insurgency threat, the U.S. government has long made it clear that any attack on Philippine government ships or aircraft or on the Philippine armed forces—for example, by China—would be covered under the MDT treaty.¹³ This makes it incumbent on the U.S., consistent with its constitutional procedures, to come to the defense of the Philippines. U.S. Secretary of State Antony Blinken has made this commitment explicit in two separate calls with the Philippine Secretary of Foreign Affairs.¹⁴ Termination of the VFA will make this more difficult at a time of increasing Chinese pressure on claims and territories under the jurisdiction of the Philippines in the South China Sea.

The history of U.S.–Philippines defense ties illustrates both Philippine vulnerability and the relationship’s resilience. In fact, the U.S. and the Philippines continue to work productively through political difficulties in their relationship. Termination of the VFA would be a setback to that effort, but both the long history of U.S.–Philippines collaboration and the vagaries of domestic politics offer hope for a solution that will continue to facilitate close military cooperation between the two countries.

Thailand. The U.S.–Thai security relationship is built on the 1954 Manila Pact, which established the now-defunct SEATO, and the 1962 Thanat–Rusk agreement.¹⁵ These were supplemented by the 2012 Joint Vision Statement for the Thai–U.S. Defense Alliance.¹⁶ In addition, Thailand gained improved access to American arms sales in 2003 when it was designated a “major, non-NATO ally.”

Thailand’s central location has made it an important component of the network of U.S. alliances in Asia. During the Vietnam War, American aircraft based in Thailand ranged from fighter-bombers and B-52s to reconnaissance aircraft. In the first Gulf War and again in the Iraq War, some of those same air bases were essential for the rapid deployment of American forces to the Persian Gulf. Access to these bases remains critical to U.S. global operations.

U.S. and Thai forces exercise together regularly, most notably in the annual Cobra Gold

exercises, initiated in 1982. This builds on a partnership that began with the dispatch of Thai forces to the Korean War, during which more than 1,200 Thai troops died out of some 6,000 deployed. The Cobra Gold exercise is the world's longest-running international military exercise in the world,¹⁷ and one of its largest. The 39th iteration, conducted in 2020, was the biggest to date,¹⁸ and involved close to 10,000 troops from seven countries, including 5,400 U.S. troops, 64 U.S. aircraft, two U.S. ships, and (for the first time) the new F-35B.¹⁹

In contrast to the close relations between their militaries, U.S.–Thailand political relations have been strained since 2006. A coup that year and another in 2014 limited military-to-military relations for more than 10 years. This was due partly to standing U.S. law prohibiting assistance to governments that result from coups against democratically elected governments and partly to policy choices by the U.S. government.

The U.S. and Thailand, however, have managed to salvage much of their military-to-military cooperation and now look to normalize relations. This has been made possible by two developments: first, elections in 2019 that led to a new civilian government and, second, Washington's new strategic focus on great-power competition with China. As a result, during the Trump Administration, the U.S. accepted the flawed Thai electoral model as an opportunity to boost the relationship. After the new Thai government was installed in July 2019, the Trump Administration moved forward with at least \$575 million in new arms sales, including 60 Stryker armored vehicles (with more to come) and four Black Hawk helicopters,²⁰ as well as hellfire missiles and other munitions, launchers, and equipment.²¹

In November 2019, Secretary of Defense Mark Esper and Thai Prime Minister/Defense Minister Prayut Chan-o-cha signed the Joint Vision Statement 2020 for the U.S.–Thai Defense Alliance. The new joint statement builds on the 2012 version. It is a messaging document intended to stress the relevancy of

the military alliance, the founding documents of which can seem anachronistic when read alone. There are some indications that the Biden Administration may not share this priority,²² particularly in light of a re-energized democracy movement and the government's repression of it.

Geopolitically, amid uncertainty in the U.S. disposition, Thailand has been drifting from the U.S. and toward China. This process, underway since the end of the Vietnam War, has been accelerating partly because of expanding economic relations between the two states. Relations, however, are also expanding because of the complications in U.S.–Thai relations arising from the political situation in Thailand and a general difference in threat perception concerning China. The U.S. considers China its greatest long-term security challenge. Thailand has no such concern.

Relations between the Thai and Chinese militaries have improved steadily over the years. Intelligence officers began formal meetings in 1988. Thai and Chinese military forces have engaged in joint naval exercises since 2005, joint counterterrorism exercises since 2007, and joint marine exercises since 2010 and conducted their first joint air force exercises in 2015.²³ The Thais conduct more bilateral exercises with the Chinese than any other military in Southeast Asia.²⁴

The Thais also have been buying Chinese military equipment for many years. Purchases in recent years have included significant buys of battle tanks and armored personnel carriers.²⁵ According to the Stockholm International Peace Research Institute (SIPRI), from 2006–2020, China has been a bigger supplier than the U.S., behind only Sweden.²⁶ Among its latest purchases, the acquisition of three submarines is currently stalled at just one by a combination of budget restraints, the priority of COVID-19 response, and public protest.²⁷ Submarines could be particularly critical to Sino–Thai relations because the attendant training and maintenance will require a greater Chinese military presence at Thai military facilities.

Australia. Australia is one of America's most important allies in the Asia-Pacific. U.S.–Australia security ties date back to World War I when U.S. forces fought under Australian command on the Western Front in Europe, and they deepened during World War II when, after Japan commenced hostilities in the Western Pacific (and despite British promises), Australian forces committed to the North Africa campaign were not returned to defend the continent. As Japanese forces attacked the East Indies and secured Singapore, Australia turned to the United States to bolster its defenses, and American and Australian forces cooperated closely in the Pacific War. Those ties and America's role as the main external supporter of Australian security were codified in the Australia–New Zealand–U.S. (ANZUS) pact of 1951.

The U.S. is now into its 10th deployment of Marine Rotational Force-Darwin, a set of annual exercises carried out in northern Australia's six-month dry season. Having reached its intended size of 2,500 Marines, it was scaled back in 2020 due to COVID-19 disruptions. In 2021, it was back to nearly full force. Approximately 2,200 Marines took part. Assets involved included "a tilt-rotor MV-22 Osprey squadron, a detachment of UH-1Y Venom utility and AH-1Z Viper attack helicopters, and a detachment of RQ-21A Blackjack drones."²⁸ In April 2021, the Australian government announced plans to upgrade bases and training areas used by the U.S. rotational forces.²⁹

The annual Marine rotation goes hand-in-hand with another recent alliance initiative, the Enhanced Air Cooperation, which involves the U.S. Air Force and also operates out of northern Australia.³⁰ Both take place in the context of a wide range of other combined activity that helps to integrate U.S. and Australian forces. These include the massive biannual Talisman Sabre exercises, which involved 34,000 American and Australian troops in 2019,³¹ and the presence of "approximately 580 Defence personnel in the United States, spread across 31 states, and the District of Columbia," the majority of whom "are embedded into the US military."³²

The two nations' chief defense and foreign policy officials meet annually (most recently in August 2020) in the Australia–United States Ministerial (AUSMIN) process to address such issues of mutual concern as security developments in the Asia-Pacific region, global security and development, and bilateral security cooperation.³³ Australia also has granted the United States access to a number of joint facilities, including space surveillance facilities at Pine Gap, which has been characterized as "arguably the most significant American intelligence-gathering facility outside the United States,"³⁴ and naval communications facilities on the North West Cape of Australia.³⁵

Australia and the United Kingdom are two of America's closest partners in the defense industrial sector. In 2010, the United States approved Defense Trade Cooperation Treaties with Australia and the U.K. that allow for the expedited and simplified export or transfer of certain defense services and items between the U.S. and its two key partners without the need for export licenses or other approvals under the International Traffic in Arms Regulations. This also allows for much greater integration among the American, Australian, and British defense industrial establishments.³⁶

Singapore. Singapore is America's closest non-ally partner in the Western Pacific. The agreements that support the security relationship are the 2015 U.S.–Singapore Defense Cooperation Agreement (DCA), which is an update of a similar 2005 agreement, and the 1990 Memorandum of Understanding Regarding United States Use of Facilities in Singapore, which was renewed in 2019 for another 15 years. Pursuant to these agreements and other understandings, Singapore hosts U.S. naval ships and aircraft as well as the principal logistics support node for the U.S. Seventh Fleet.

Singapore trains "approximately 1,000 military personnel in the United States each year" on such American-produced equipment as F-15SG and F-16C/D fighter aircraft and CH-47 Chinook and AH-64 Apache helicopters.³⁷ Along with American allies Australia, Japan, and South Korea, Singapore also has ordered

and been approved to buy the F-35.³⁸ Like others of its assets, the F-35s will be housed at training facilities in the U.S.³⁹ and perhaps on Guam under an agreement reached in 2019.⁴⁰

New Zealand. For much of the Cold War, U.S. defense ties with New Zealand were similar to those between America and Australia. In 1986, however, as a result of controversies over U.S. Navy employment of nuclear power and the possible deployment of U.S. naval vessels with nuclear weapons, the U.S. suspended its obligations to New Zealand under the 1951 ANZUS Treaty.

Defense relations improved in the early 21st century as New Zealand committed forces to Afghanistan and dispatched an engineering detachment to Iraq. The 2010 Wellington Declaration and 2012 Washington Declaration, while not restoring full security ties, allowed the two nations to resume high-level defense dialogues.⁴¹ As part of this warming of relations, New Zealand rejoined the multinational U.S.-led RIMPAC (Rim of the Pacific) naval exercise in 2012 and has participated in each iteration since then.

In 2013, U.S. Secretary of Defense Chuck Hagel and New Zealand Defense Minister Jonathan Coleman announced the resumption of military-to-military cooperation, and in July 2016, the U.S. accepted an invitation from New Zealand to make a single port call, reportedly with no change in U.S. policy to confirm or deny the presence of nuclear weapons on the ship.⁴² At the time of the visit in November 2016, both sides claimed to have satisfied their respective legal requirements.⁴³ The prime minister expressed confidence that the vessel was not nuclear-powered and did not possess nuclear armaments, and the U.S. neither confirmed nor denied this.

The November 2016 visit occurred in a unique context, including an international naval review and relief response to the Kaikoura earthquake. Since then, there have been several other ship visits by the U.S. Coast Guard, and in 2017, New Zealand lent the services of one its naval frigates to the U.S. Seventh Fleet following a deadly collision between the destroyer

USS *Fitzgerald* and a Philippine container ship that killed seven American sailors.

New Zealand is a member of the elite “five eyes” intelligence alliance with the U.S., Canada, Australia, and the U.K.

Taiwan. When the United States shifted its recognition of the government of China from the Republic of China (on Taiwan) to the People’s Republic of China (PRC, the mainland), it also declared certain commitments concerning the security of Taiwan. These commitments are embodied in the Taiwan Relations Act (TRA) and the subsequent “Six Assurances.”

The TRA is an American law, not a treaty. Under the TRA, the United States maintains programs, transactions, and other relations with Taiwan through the American Institute in Taiwan (AIT). Except for the Sino–U.S. Mutual Defense Treaty, which had governed U.S. security relations with Taiwan and was terminated by President Jimmy Carter following the shift in recognition to the PRC, all other treaties and international agreements made between the Republic of China and the United States remain in force.

Under the TRA, it is the policy of the United States “to provide Taiwan with arms of a defensive character.”⁴⁴ The TRA also states that the U.S. “will make available to Taiwan such defense articles and services in such quantity as may be necessary to enable Taiwan to maintain a sufficient self-defense capability.”⁴⁵ The U.S. has implemented these provisions of the TRA through sales of weapons to Taiwan.

The TRA states that it is also U.S. policy “to consider any effort to determine the future of Taiwan by other than peaceful means, including by boycotts or embargoes, a threat to the peace and security of the Western Pacific area and of grave concern to the United States” and “to maintain the capacity of the United States to resist any resort to force or other forms of coercion that would jeopardize the security, or the social or economic system, of the people on Taiwan.”⁴⁶ To this end:

The President is directed to inform the Congress promptly of any threat to the

security or the social or economic system of the people on Taiwan and any danger to the interests of the United States arising therefrom. The President and the Congress shall determine, in accordance with constitutional processes, appropriate action by the United States in response to any such danger.⁴⁷

Supplementing the TRA are the “Six Assurances” issued by President Ronald Reagan in a secret July 1982 memo, later publicly released and the subject of a Senate hearing. These assurances were intended to moderate the third Sino–American communiqué, itself generally seen as one of the “Three Communiqués” that form the foundation of U.S.–PRC relations. These assurances of July 14, 1982, were that:

In negotiating the third Joint Communiqué with the PRC, the United States:

1. *has not agreed to set a date for ending arms sales to Taiwan;*
2. *has not agreed to hold prior consultations with the PRC on arms sales to Taiwan;*
3. *will not play any mediation role between Taipei and Beijing;*
4. *has not agreed to revise the Taiwan Relations Act;*
5. *has not altered its position regarding sovereignty over Taiwan;*
6. *will not exert pressure on Taiwan to negotiate with the PRC.*⁴⁸

Although the United States sells Taiwan a variety of military equipment and sends observers to its major annual exercises, it does not engage in joint exercises with the Taiwan armed forces. Some Taiwan military officers, however, attend professional military education institutions in the United States. There also are regular high-level meetings between

senior U.S. and Taiwan defense officials, both uniformed and civilian.

The United States does not maintain any bases in Taiwan. However, with the 2018 Taiwan Travel Act and successive NDAAAs, Congress has sent strong signals of support for greater military-to-military interaction. This could lead to a significant increase in the number and/or grade of American military officers visiting Taiwan in the coming years.

Vietnam, Malaysia, and Indonesia. On a region-wide basis, the U.S. has two major ongoing defense-related initiatives to expand its relationships and diversify the geographical spread of its forces. The Maritime Security Initiative is intended to improve the security capacity of U.S. partners, and the Pacific Deterrence Initiative (PDI) bolsters America’s military presence and makes it more accountable.

Among the most important of the bilateral partnerships in this effort, beyond those listed above, are Vietnam, Malaysia, and Indonesia. None of these relationships is as extensive and formal as America’s relationship with Singapore, India, and U.S. treaty allies, but all are of growing significance.

Since shortly after the normalization of diplomatic relations between the two countries in 1995, the U.S. and Vietnam also have gradually normalized their defense relationship. The relationship was codified in 2011 with a Memorandum of Understanding Advancing Bilateral Defense Cooperation that covers five areas of operations, including maritime security. In 2015, the MOU was updated with the Joint Vision Statement on Defense Cooperation, which includes a reference to “cooperation in the production of new technologies and equipment” and was implemented under a three-year 2018–2020 Plan of Action for United States–Viet Nam Defense Cooperation that was agreed upon in 2017.⁴⁹

The most significant development with respect to security ties over the past several years has been the relaxation of the ban on sales of arms to Vietnam. The U.S. lifted the embargo on maritime security–related equipment in the fall of 2014 and then ended the embargo

on arms sales completely in 2016. The embargo had long served as a psychological obstacle to Vietnamese cooperation on security issues, but lifting it does not necessarily change the nature of the articles that are likely to be sold.

Transfers to date have been to the Vietnamese Coast Guard. These include provision under the Excess Defense Articles (EDA) program of two decommissioned *Hamilton*-class cutters and 24 Metal Shark patrol boats as well as infrastructure support.⁵⁰ By 2022, Vietnam is scheduled to take delivery of six unmanned Boeing-made Scan Eagle aerial vehicles (UAVs) for its Coast Guard.⁵¹ The U.S. is also providing T-6 turboprop trainer aircraft.⁵² Agreement has yet to be reached with respect to sales of bigger-ticket items like refurbished P-3 maritime patrol aircraft, although they have been discussed.

The Cooperative Humanitarian and Medical Storage Initiative (CHAMSI) is designed to enhance cooperation on humanitarian assistance and disaster relief by, among other things, prepositioning related American equipment in Da Nang, Vietnam.⁵³ This is a sensitive issue for Vietnam and is not often referenced publicly, but it was emphasized during Vietnamese Prime Minister Nguyen Xuan Phuc's visit to Washington in 2017 and again during Secretary of Defense James Mattis's visit to Vietnam in 2018. In the same year, Vietnam participated in RIMPAC for the first time. In 2020, it did not participate in a scaled-down COVID-year version of the exercise.⁵⁴

There have been two high-profile port calls to Vietnam since 2018. Early that year, the USS *Carl Vinson* visited Da Nang with its escort ships in the first port call by a U.S. aircraft carrier since the Vietnam War, and another carrier, USS *Theodore Roosevelt*, visited Da Nang in March 2020. These are significant signals from Vietnam about its receptivity to partnership with the U.S. military—messages underscored very subtly in Vietnam's 2019 *Viet Nam National Defence* white paper.⁵⁵

Nevertheless, significant limits on the U.S.–Vietnam security relationship persist, including a Vietnamese defense establishment that is very cautious in its selection of

defense partners, party-to-party ties between the Communist Parties of Vietnam and China, and a Vietnamese foreign policy that seeks to balance relationships with all major powers. The U.S., like others among Vietnam's security partners, remains officially restricted to one port call a year, with an additional one to two calls on Vietnamese bases being negotiable.

The U.S. and Malaysia, despite occasional political differences, “have maintained steady defense cooperation since the 1990s.” Examples of this cooperation include Malaysian assistance in the reconstruction of Afghanistan and involvement in anti-piracy operations “near the Malacca Strait and...off the Horn of Africa” as well as “jungle warfare training at a Malaysian facility, bilateral exercises like Kris Strike, and multilateral exercises like Cobra Gold, which is held in Thailand and involves thousands of personnel from several Asian countries plus the United States.”⁵⁶ The U.S. has occasionally flown P-3 and/or P-8 patrol aircraft out of Malaysian bases in Borneo.

The U.S. relationship with Malaysia was strengthened under President Barack Obama and continued on a positive trajectory under the Trump Administration. In addition to counterterrorism cooperation, the U.S. is focused on helping Malaysia to ensure maritime domain awareness. In 2020, then-Deputy Assistant Secretary of Defense for South and Southeast Asia Reed B. Werner summarized recent U.S. assistance in this area:

[M]aritime domain awareness is important for Malaysia, given where it sits geographically. Since 2017, we have provided nearly US\$200 million (RM853 million) in grant assistance to the Malaysian Armed Forces to enhance maritime domain awareness, and that includes ScanEagle unmanned aerial vehicles (UAV), maritime surveillance upgrades, and long-range air defence radar.⁵⁷

The upgrading of its F-18 fleet is the most significant U.S. defense program currently underway with Malaysia.⁵⁸

The U.S.–Indonesia defense relationship was revived in 2005 following a period of estrangement caused by American concerns about human rights. It now includes regular joint exercises, port calls, and sales of weaponry. Because of their impact on the operating environment in and around Indonesia, as well as the setting of priorities in the U.S.–Indonesia relationship, the U.S. is also working closely with Indonesia’s defense establishment to reform Indonesia’s strategic defense planning processes.

U.S.–Indonesia military cooperation is governed by two agreements, the 2010 Framework Arrangement on Cooperative Activities in the Field of Defense and the 2015 Joint Statement on Comprehensive Defense Cooperation,⁵⁹ as well as the 2010 Comprehensive Partnership. These agreements have encompassed “more than 200 bilateral military engagements a year” and cooperation in six areas: “maritime security and domain awareness; defense procurement and joint research and development; peacekeeping operations and training; professionalization; HA/DR [High Availability/Disaster Recovery]; and countering transnational threats such as terrorism and piracy.”⁶⁰

The agreements also frame multiple arms transfers. According to the U.S. Department of State, “[t]he United States has \$1.88 billion in active government-to-government sales cases with Indonesia under the Foreign Military Sales (FMS) system.”⁶¹ Perhaps most significantly, in 2018, the United States carried through on the transfer of 24 refurbished F-16s to Indonesia under its EDA program and a sale of eight new Apache helicopters. The U.S. government also remains involved in talks with Indonesia to fill its need for new fighter jets.⁶²

The U.S. and Indonesia also have signed two of the four foundational information-sharing agreements that the U.S. maintains with its closest partners: the General Security of Military Information Agreement (GSOMIA) and Communications Interoperability and Security Memorandum of Agreement (CISMOA).

Afghanistan. On October 7, 2001, U.S. forces invaded Afghanistan in response to

the September 11, 2001, terrorist attacks on the United States. This marked the beginning of Operation Enduring Freedom to combat al-Qaeda and its Taliban supporters. The U.S., in alliance with the U.K. and the anti-Taliban Afghan Northern Alliance forces, ousted the Taliban from power in December 2001. Most Taliban and al-Qaeda leaders fled across the border into Pakistan’s Federally Administered Tribal Areas where they regrouped and initiated an insurgency in Afghanistan in 2003.

In August 2003, NATO joined the war in Afghanistan and assumed control of the International Security Assistance Force (ISAF). In 2011, at the height of the war, there were 50 troop-contributing nations and nearly 150,000 NATO and U.S. forces on the ground in Afghanistan.

On December 28, 2014, NATO formally ended combat operations and relinquished responsibility to the Afghan security forces, which numbered around 352,000 (including army and police).⁶³ After Afghan President Ashraf Ghani signed a bilateral security agreement with the U.S. and a Status of Forces Agreement with NATO, the international coalition launched Operation Resolute Support to train and support Afghan security forces.

In 2018, U.S. Special Envoy Zalmay Khalilzad initiated talks with the Taliban in Doha, Qatar, in an attempt to find a political solution to the conflict and encourage the group to negotiate with the Afghan government. In February 2020, Ambassador Khalilzad and Taliban co-founder and chief negotiator Abdul Ghani Baradar signed a tentative peace agreement in which the Taliban agreed that it will not allow al-Qaeda or any other transnational terrorist group to use Afghan soil. It also agreed not to attack U.S. forces as long as they provided and remained committed to a withdrawal timeline, eventually set at May 2021. One of the main objectives of this interim agreement was to jumpstart intra-Afghan negotiations between the Taliban and the Afghan government.

Intra-Afghan talks did take place but were hampered by continued Taliban attacks on Afghan forces, domestic political turmoil in

Afghanistan following the 2019 presidential elections, disagreements between the Afghan government and the Taliban regarding prisoner exchanges, and the COVID-19 global pandemic.

In April 2021, President Joseph Biden announced that the U.S. would be withdrawing its remaining 2,500 soldiers from Afghanistan by September 11, 2021, remarking that America's "reasons for remaining in Afghanistan are becoming increasingly unclear."⁶⁴ As the final contingent of U.S. forces was leaving Afghanistan in August 2021, the Taliban launched a rapid offensive across the country, seizing provincial capitals and eventually the national capital, Kabul, in a matter of weeks. Amid the Taliban offensive, President Ghani fled the country for the UAE and the Afghan security forces largely abandoned their posts.⁶⁵

Having left the Air Force base at Bagram weeks earlier, the U.S. and other countries were left trying to evacuate their citizens and allies from the Kabul International Airport as the Taliban assumed control of the capital. Amid the chaos, a suicide bombing attack on the airport perimeter on August 26 killed 13 U.S. military personnel and nearly 200 Afghans. The local branch of ISIS, IS-K, claimed responsibility for the attack, and the Biden Administration subsequently launched drone strikes on two IS-K targets.⁶⁶ The Taliban formed a new government in early September comprised almost entirely of hardline elements of the Taliban and Haqqani Network.⁶⁷

Pakistan. During the early stages of the war in Afghanistan, the U.S. and NATO relied heavily on logistical supply lines running through Pakistan to resupply anti-Taliban coalition forces. Supplies and fuel were carried on transportation routes from the port at Karachi to Afghan-Pakistani border crossing points at Torkham in the Khyber Pass and Chaman in Baluchistan province. For roughly the first decade of the war, approximately 80 percent of U.S. and NATO supplies traveled through Pakistani territory. This amount has decreased progressively as the U.S. and allied troop presence has shrunk.

U.S.-Pakistan relations suffered an acrimonious rupture in 2011 when U.S. special forces conducted a raid on Osama bin Laden's hideout in Abbottabad not far from facilities run by the Pakistani military. In 2017, President Donald Trump suspended billions of dollars of U.S. military assistance to Pakistan and declared that "[w]e can no longer be silent about Pakistan's safe havens for terrorist organizations, the Taliban, and other groups that pose a threat to the region and beyond."⁶⁸

Between 2001 and 2016, Pakistan received approximately \$30 billion in aid and "reimbursements" from the U.S. in the form of coalition support funds (CSF) for its military deployments and operations along the border with Afghanistan. In 2016, reflecting a trend of growing congressional resistance to military assistance for Pakistan, Congress blocked funds for the provision of eight F-16s. According to the Congressional Research Service (CRS), U.S. aid appropriations and military reimbursements have fallen continuously since 2013, from \$2.60 billion in that year to \$108 million in 2018. CSF reimbursements fell to zero in 2017 and remained at that level through 2021.⁶⁹

Since 2015, U.S. Administrations have refused to certify that Pakistan has met requirements to crack down on the Haqqani Network, an Afghan terrorist group that resides in northern Pakistan. As the CRS notes, "The NDAA for FY2019 revamped the CSF program, authorizing \$350 million to support security enhancement activities along Pakistan's western border, subject to certification requirements that have not been met to date."⁷⁰

In addition to suspending aid, the Trump Administration supported both the addition of Pakistan to the Financial Action Task Force (FATF) "grey list" for failing to fulfill its obligations to prevent the financing of terrorism and its designation as a "Country of Particular Concern under the International Religious Freedom Act of 1998 for having engaged in or tolerated 'systematic, ongoing, [and] egregious violations of religious freedom.'"⁷¹ Pakistan has lobbied to be taken off the FATF grey list, and

others have argued for moving it to the organization's "black list." In a February 2021 meeting, the FATF elected to keep Pakistan on the grey list, noting that although Pakistan has made significant progress in taking action against money laundering and the financing of terrorism, "serious deficiencies" remained.⁷²

Pakistan has made significant progress in combating anti-state extremist groups operating within its borders. Pakistan has long sheltered the Afghan Taliban, Haqqani Network, and other allied extremist groups, but in the late 2000s and early 2010s, several anti-state extremist groups, including the Pakistani Taliban or TTP, began to target Pakistani security forces and civilians. As a result, according to the South Asia Terrorism Portal, the number of terrorism-related incidents within Pakistan surged from 150 in 2000 to 2,204 in 2010.⁷³ The number of incidents peaked in 2013 at 3,923 before Pakistan began a series of military operations against these groups in 2014 and fell nearly every year thereafter, reaching 319 in 2020.⁷⁴ There were some signs in 2021, however, that the TTP is reconstituting itself.⁷⁵

Fatalities from terrorism inside Pakistan have fallen as well. After peaking in 2009 at 11,317, there were 506 fatalities from terrorism (including civilians, security forces, and terrorists) in 2020.⁷⁶

Pakistan-U.S. relations improved modestly from 2018–2021 as Pakistan involved itself as a key player in bringing the Afghan Taliban to the negotiating table with the Afghan government. It remains to be seen how the Biden Administration will approach the often troubled U.S. relationship with Pakistan.

Pakistan's Nuclear Weapons Stockpile. The *Bulletin of the Atomic Scientists* estimates that Pakistan "has a nuclear weapons stockpile of 140 to 150 warheads" that could "realistically grow to 220 to 250 warheads by 2025, if the current trend continues."⁷⁷ The possibility that terrorists could gain effective access to Pakistani nuclear weapons is contingent on a complex chain of circumstances. Concern about the safety and security of Pakistan's nuclear weapons increases when India-Pakistan tensions

increase. If Pakistan were to move its nuclear assets or, worse, take steps to mate weapons with delivery systems, the likelihood of theft or infiltration by terrorists would increase.

Increased reliance on tactical nuclear weapons (TNWs) is of particular concern because launch authorities for TNWs are typically delegated to lower-tier field commanders far from the central authority in Islamabad. Another concern is the possibility that miscalculations could lead to regional nuclear war if India's leaders were to lose confidence that nuclear weapons in Pakistan are under government control or, conversely, were to assume that they were under Pakistani government control after they ceased to be.

There are additional concerns that Islamist extremist groups with links to the Pakistan security establishment could exploit those links to gain access to nuclear weapons technology, facilities, and/or materials. The realization that Osama bin Laden stayed for six years within a half-mile of Pakistan's premier defense academy has fueled concern that al-Qaeda can operate relatively freely in parts of Pakistan and might eventually gain access to Pakistan's nuclear arsenal. Pakistan's weapons-grade materials were ranked the 20th least secure in 2018, with only Iran's and North Korea's ranking lower.⁷⁸

There is the additional (though less likely) scenario of extremists gaining access through a collapse of the state. While Pakistan remains unstable because of its weak economy, regular terrorist attacks, sectarian violence, civil-military tensions, and the growing influence of religious extremist groups, the Pakistani state is not likely to collapse altogether. The country's most powerful institution, the 550,000-strong army that has ruled Pakistan for almost half of its existence, would almost certainly intervene and assume control once again if the political situation began to unravel. The potential breakup of the Pakistani state would have to be preceded by the disintegration of the army, which currently is not plausible.⁷⁹

Pakistan-India Conflict. India and Pakistan have fought four wars since partition

in 1947, including conflicts in 1947, 1965, 1971, and 1999. Deadly border skirmishes across the Line of Control in Kashmir, a disputed territory claimed in full by both India and Pakistan, are commonplace.

The military and strategic dynamic between India and Pakistan has grown more volatile since the May 2014 election of Bharatiya Janata Party (BJP) leader Narendra Modi as India's prime minister. Modi invited Pakistani Prime Minister Nawaz Sharif to his swearing-in ceremony but then later called off foreign secretary-level talks that were scheduled for August 2014 to express anger over a Pakistani official's meeting with Kashmiri separatist leaders. During the same month, the two sides engaged in intense firing and shelling along their international border (called the working boundary) and across the Line of Control that divides Kashmir. A similar escalation in border tensions occurred again in October 2014 when a series of firing incidents claimed more than a dozen casualties with several dozen more injured.⁸⁰

On December 25, 2015, a meeting did occur when Modi made an impromptu visit to Lahore—the first visit to Pakistan by an Indian leader in 12 years—to meet with Sharif. The visit created enormous goodwill between the two countries and raised hope that official dialogue would soon resume. Again, however, violence marred the new opening. Six days after the meeting, militants attacked an Indian airbase at Pathankot, killing seven Indian security personnel.⁸¹

As a result, official India-Pakistan dialogue remains deadlocked even though the two sides are reportedly communicating quietly through their foreign secretaries and national security advisers. With Prime Minister Modi's BJP sweeping national elections in May 2019 and earning him a second term in office, few expect any major breakthroughs in the near term. As noted, Pakistan continues to harbor terrorist groups like Lashkar-e-Taiba (LeT) and Jaish-e-Mohammed (JeM). The latter was responsible for a January 2, 2016, attack on the Indian airbase at Pathankot, a February 2018

attack on an Indian army camp in Kashmir, and a February 2019 attack on Indian security forces in Kashmir—the deadliest single terrorist attack in the disputed region since the eruption of an insurgency in 1989.⁸²

Hafez Muhammed Saeed, LeT's founder and the leader of its front organization Jamaat-ud-Dawa (JuD), has periodically been placed under arrest, only later to be released. He was arrested most recently in July 2019 and remains under house arrest, charged with financing terrorism, with his trial delayed due to the COVID-19 pandemic.⁸³ Previously, he had operated freely in Pakistan, often holding press conferences and inciting violence against India during large public rallies.

With terrorist groups operating relatively freely in Pakistan and maintaining links to its military and intelligence services, there is a moderate risk that the two countries might eventually engage in all-out conflict. Pakistan's recent focus on incorporating tactical nuclear weapons into its warfighting doctrine has also raised concern that conflict now involves a higher risk of nuclear exchange. In early 2019 Pakistan conducted several tests of its nuclear-capable, short-range NASR ballistic missiles.⁸⁴

Following a deadly attack on Indian security forces in Pulwama, Kashmir, in February 2019, India launched an even more daring cross-border raid. For the first time since the Third India-Pakistan War of 1971, the Indian air force crossed the Line of Control and dropped ordnance inside Pakistan proper (as opposed to disputed Kashmir), targeting several JeM training camps in Khyber Pakhtunkhwa province.⁸⁵ Delhi stressed that the "non-military" operation was designed to avoid civilian casualties and was preemptive in nature because it had credible intelligence that JeM was attempting other suicide attacks in the country.

In response, Pakistan launched fighter jets to conduct their own strike on targets located on India's side of the Line of Control (LoC) in Kashmir, prompting a dogfight that resulted in the downing of an Indian MiG-21. Pakistan released the captured MiG-21 pilot days later,

ending the brief but dangerous crisis. Nevertheless, both militaries continued to engage in artillery attacks along the disputed border throughout 2019. Pakistan reported more than 45 casualties, including 14 soldiers, from Indian shelling between January 2019 and October 2019. India reported 21 casualties and over 2,000 cease-fire violations in the same period.⁸⁶

Skirmishes at the LoC continued and even accelerated in 2020, with India's Home Ministry registering "5,133 instances of ceasefire violations along the Line of Control (LoC) with Pakistan last year, which resulted in 46 fatalities."⁸⁷ In early 2021, however, India and Pakistan experienced at least a partial diplomatic thaw as both countries combated the COVID-19 global pandemic. In February, both countries agreed to observe a strict cease-fire along the LoC,⁸⁸ and in March, Pakistan's Chief of Army Staff, General Qamar Javed Bajwa, called for both sides to "bury the past and move forward."⁸⁹

India. During the Cold War, U.S.–Indian military cooperation was minimal except for a brief period during the Sino–Indian border war in 1962 when the U.S. supplied India with arms and ammunition. The rapprochement was short-lived, and the U.S. suspended aid to India following the Second Indo–Pakistan War of 1965. The Indo–U.S. relationship was again characterized by suspicion and mistrust, especially during the 1970s under the Nixon Administration. The principal source of tension was India's robust relationship with Moscow, with which it signed a major defense treaty in 1971, and the U.S. provision of military aid to Pakistan. America's ties with India hit a nadir during the 1971 Indo–Pakistani war when the U.S. deployed the aircraft carrier USS *Enterprise* toward the Bay of Bengal in a show of support for Pakistani forces.

Military ties between the U.S. and India have improved significantly over the past two decades as the two sides have moved toward establishment of a strategic partnership based on mutual concerns about China's increasingly belligerent behavior and converging interests in countering regional terrorism and

promoting a "Free and Open Indo-Pacific." The U.S. has supplied roughly \$20 billion worth of U.S. military equipment to India since 2008, including C-130J and C-17 transport aircraft, P-8 maritime surveillance aircraft, Chinook airlift helicopters, Apache attack helicopters, artillery batteries, and Firefinder radar. The two countries also have several information-sharing and intelligence-sharing agreements in place, including one that covers "white" or commercial shipping in the Indian Ocean.

Defense ties have advanced at an accelerated rate since the election of Prime Minister Narendra Modi in 2014. In 2015, the U.S. and India agreed to renew and upgrade their 10-year Defense Framework Agreement. In 2016, the two governments finalized the text of the Logistics Exchange Memorandum of Agreement (LEMOA), which allows each country to access the other's military supplies and refueling capabilities through ports and military bases, and the U.S. designated India a "major defense partner," a designation unique to India that is intended to facilitate its access to American defense technology. Since then, Indian and U.S. warships have begun to offer each other refueling and resupply services at sea.⁹⁰ In October 2020, U.S. P-8 maritime surveillance aircraft were refueled for the first time at an Indian military base in the Andaman and Nicobar Islands.

America's strategic and defense ties with India advanced in several important ways during the Trump Administration. In 2018, India was granted STA-1 status, easing controls on exports of advanced defense technology. India is only the third Asian country after Japan and South Korea to be granted STA-1 status. In the same year, India established a permanent naval attaché representative to U.S. Central Command in Bahrain, fulfilling a long-standing request from New Delhi.

In 2018, the two countries also signed the Communications Compatibility and Security Agreement (COMCASA), which will allow the U.S. to sell India encrypted communications equipment and create secure channels for communication between the Indian and U.S.

militaries. In 2020, the U.S. and India signed the Basic Exchange Cooperation Agreement (BECA), which creates a framework for sharing geospatial intelligence.

Beyond these “foundational” or “enabling” military agreements, in recent years, the two countries have also signed an agreement on Helicopter Operations from Ships Other Than Aircraft Carriers (HOSTAC) and an Industrial Security Annex (ISA) that allows the U.S. to share classified information with private Indian defense firms. During the Trump Administration, the two countries also initiated a new 2+2 defense and foreign ministers dialogue while reviving the Quad grouping (which joins India and the U.S. with Australia and Japan) in 2017.⁹¹ In 2020, the four countries held the first Quad naval exercise since 2007. When a deadly crisis erupted at the China–India border in 2020, the Trump Administration provided India with two advanced surveillance drones and cold-weather gear for Indian soldiers.

In recent years, India has made additional purchases of U.S. military hardware, including C-17 transport aircraft, Apache attack helicopters, MH-60R Seahawk multi-mission helicopters, Sig Sauer assault rifles, and M777 ultralight howitzer artillery guns. It also is reportedly considering the purchase of 30 armed MQ-9 reaper drones (10 each for the three branches of its military) for \$3 billion and a half-dozen highly capable P-8I maritime aircraft (to supplement the dozen currently in operation) for nearly \$2 billion.

New Delhi and Washington regularly hold joint annual military exercises across all services. They include the Yudh Abhyas army exercises, Red Flag air force exercises, and Malabar naval exercise, which added Japan and Australia as permanent participants in 2012 and 2020, respectively. In late 2019, India and the U.S. held their first-ever tri-service military exercise, nicknamed “Tiger Triumph.”

Quality of Key Allied or Partner Armed Forces in Asia

Because of the lack of an integrated, regional security architecture along the lines of

NATO, the United States partners with most of the nations in the Asian region on a bilateral basis. This means that there is no single standard to which all of the local militaries aspire; instead, the region is characterized by a wide range of capabilities that are influenced by local threat perceptions, institutional interests, physical conditions, historical factors, and budgetary considerations.

Moreover, most Asian militaries have limited combat experience, particularly in high-intensity air or naval combat. Some, like Malaysia, have never fought an external war since gaining independence in the mid-20th century. The Indochina wars, the most recent high-intensity conflicts, are now more than 50 years in the past. It is therefore unclear how well Asia’s militaries have trained for future warfare and whether their doctrine will meet the exigencies of wartime realities.

Based on examinations of equipment, however, we assess that several Asian allies and friends have substantial potential military capabilities that are supported by robust defense industries and significant defense spending. The defense budgets of Japan, South Korea, and Australia are estimated to be among the world’s 15 largest, and the three countries’ military forces field some of the world’s most advanced weapons, including F-15s in the Japan Air Self Defense Force and ROK Air Force; airborne early warning (AEW) platforms; Aegis-capable surface combatants and modern diesel-electric submarines; and third-generation main battle tanks. As noted, all three nations are also involved in the production and purchase of F-35 fighters.

At this point, both the Japanese and Korean militaries arguably are more capable than most European militaries, at least in terms of conventional forces. Japan’s Self Defense Forces, for example, field more tanks, principal surface combatants, and combat-capable aircraft (617, 51, and 546, respectively) than their British counterparts field (227, 20, and 222, respectively).⁹² Similarly, South Korea fields a larger military of tanks, principal surface combatants, and combat-capable aircraft (2,321, 26, and

563, respectively) than their German counterparts field (225, 15, and 228, respectively).⁹³

Both the ROK and Japan are also increasingly interested in developing missile defense capabilities, including joint development and coproduction in the case of Japan. After much negotiation and indecision, South Korea deployed America's Terminal High Altitude Area Defense (THAAD) missile defense system on the peninsula in 2017. It is also pursuing an indigenous missile defense capability.

As for Japan, its Aegis-class destroyers are equipped with SM-3 missiles, and it decided in 2017 to install the Aegis Ashore missile defense system to supplement its Patriot missile batteries.⁹⁴ In June 2020, Tokyo unexpectedly cancelled plans to build two Aegis Ashore missile defense sites, citing the potential for the interceptor missile's first-stage booster to fall onto populated areas. Other likely factors in the decision include the overall cost of the program, inept handling of the site-selection process, and government unwillingness to press national objectives over local resistance.⁹⁵

Australia also has very capable armed forces. They are smaller than NATO militaries but have major operational experience, having deployed both to Iraq and to Afghanistan as well as to help the Philippines with its Southern insurgency. Australia's military has several operations underway in the region from the Southwest Pacific islands, which are so critically important to it, to its partnership with Malaysia in the North Indian Ocean and South China Sea to the Korean Peninsula.⁹⁶

Singapore's small population and physical borders limit the size of its military, but in terms of equipment and training, it has Southeast Asia's largest defense budget⁹⁷ and fields some of the region's highest-quality forces. Singapore's ground forces can deploy third-generation Leopard II main battle tanks, and its fleet includes four conventional submarines (to be replaced by four new, more capable submarines from Germany)⁹⁸ and six frigates and eight missile-armed corvettes. Its air force has not only F-15E Strike Eagles and F-16s, but also one of Southeast Asia's largest fleets

of airborne early warning and control aircraft (G550-AEW aircraft) and a squadron of KC-130 tankers that can help to extend range or time on station.⁹⁹ In January 2020, Singapore was cleared by the U.S. Department of State to purchase 12 F-35 combat aircraft, with an initial order placed for four aircraft and an option to purchase an additional eight.

At the other extreme, the Armed Forces of the Philippines are among the region's weakest military forces. Having long focused on waging counterinsurgency campaigns while relying on the United States for its external security, the Philippines spent only 1.0 percent of GDP on its military in 2020.¹⁰⁰ The most modern ships in the Philippine navy are three former U.S. *Hamilton*-class Coast Guard cutters. In 2017, however, South Korea completed delivery of 12 light attack fighter aircraft to the Philippines; the Philippine air force had possessed no jet fighter aircraft since 2005 when the last of its F-5s were decommissioned. The Philippines is in discussions with South Korea to acquire upgrades to its FA-50 light fighters, as well as other military equipment.¹⁰¹ It is also taking delivery of South Korean-built ships.¹⁰²

The armed forces of American allies from outside the region, particularly those of France and the United Kingdom, should also be mentioned. France has overseas bases in New Caledonia and the South Pacific, locally based assets, and 2,900 personnel in the region.¹⁰³ It also conducts multiple naval deployments each year out of Metropolitan France. The U.K. is likewise very active in the region and, given its unparalleled integration with U.S. forces, can employ its capability directly in pursuit of shared objectives. It has a naval logistics facility in Singapore and Royal Gurkhas stationed in Brunei and has been an integral part of a U.S.-led mission to monitor seaborne evasions.

Current U.S. Presence in Asia

U.S. Indo-Pacific Command. Established in 1947 as U.S. Pacific Command (PACOM), USINDOPACOM is the oldest and largest of America's unified commands. According to its Web site:

USINDOPACOM protects and defends, in concert with other U.S. Government agencies, the territory of the United States, its people, and its interests. With allies and partners, USINDOPACOM is committed to enhancing stability in the Asia-Pacific region by promoting security cooperation, encouraging peaceful development, responding to contingencies, deterring aggression, and, when necessary, fighting to win. This approach is based on partnership, presence, and military readiness.¹⁰⁴

USINDOPACOM's area of responsibility (AOR) includes not only the expanses of the Pacific, but also Alaska and portions of the Arctic, South Asia, and the Indian Ocean. Its 36 nations represent more than 50 percent of the world's population and include two of the three largest economies and nine of the 10 smallest; the most populous nation (China); the largest democracy (India); the largest Muslim-majority nation (Indonesia); and the world's smallest republic (Nauru). The region is a vital driver of the global economy and includes the world's busiest international sea-lanes and nine of its 10 largest ports. By any meaningful measure, the Indo-Pacific is also the world's most militarized region, with seven of its 10 largest standing militaries and five of its declared nuclear nations.¹⁰⁵

Under INDOPACOM are a number of component commands, including:

- **U.S. Army Pacific.** USARPAC is the Army's component command in the Pacific. Headquartered in Hawaii and with approximately 80,000 soldiers, it supplies Army forces as necessary for various global contingencies and "has sent peacekeeping forces to the Sinai Peninsula, Haïti, East Timor, and Bosnia."¹⁰⁶ Among its 12 subordinate commands are U.S. Army Japan, the 500th Military Intelligence Brigade, and U.S. Army Alaska.
- **U.S. Pacific Air Force.** PACAF is responsible for planning and conducting defensive and offensive air operations in the Asia-Pacific region. It has three numbered air forces under its command: 5th Air Force in Japan; 7th Air Force in Korea; and 11th Air Force, headquartered in Alaska. These air forces field two squadrons of F-15s, two squadrons of F-22s, five squadrons of F-16s, and a single squadron of A-10 ground attack aircraft as well as two squadrons of E-3 early-warning aircraft, tankers, and transports. Other forces that regularly come under PACAF command include B-52, B-1, and B-2 bombers. In 2020, PACAF activated two F-35A squadrons at Eielson Air Force Base in Alaska. Eventually, the base will host a total of 54 "combat-coded" F-35A aircraft.
- **U.S. Pacific Fleet.** PACFLT normally controls all U.S. naval forces committed to the Pacific, which usually represents 60 percent of the Navy's fleet. It is organized into Seventh Fleet, headquartered in Japan, and Third Fleet, headquartered in California. Seventh Fleet comprises the forward-deployed element of PACFLT and includes the only American carrier strike group (CTF-70, ported at Yokosuka, Japan) and amphibious group (CTF-76, ported at Sasebo, Japan) that are home-ported abroad. The Third Fleet's AOR spans the West Coast of the United States to the International Date Line and includes the Alaskan coastline and parts of the Arctic. In recent years, the involvement of the Third Fleet's five carrier strike groups in the Western Pacific has been eased by the blurring of this boundary between the two fleets' areas of operation under a concept called "Third Fleet Forward." Beginning in 2015, the conduct of Freedom of Navigation Operations (FONOPS) that challenge excessive maritime claims, a part of the Navy's mission since 1979, has assumed a higher profile as a result of several well-publicized operations in the South China Sea. Under the Trump Administration, the frequency of these operations increased significantly.

- **U.S. Marine Forces Pacific.** With its headquarters in Hawaii, MARFORPAC controls elements of the U.S. Marine Corps operating in the Asia–Pacific region. Because of its extensive responsibilities and physical span, MARFORPAC controls two-thirds of Marine Corps forces: the I Marine Expeditionary Force (MEF), centered on the 1st Marine Division, 3rd Marine Air Wing, and 1st Marine Logistics Group, and the III Marine Expeditionary Force, centered on the 3rd Marine Division, 1st Marine Air Wing, and 3rd Marine Logistics Group. The I MEF is headquartered at Camp Pendleton, California, and the III MEF is headquartered on Okinawa, although each has various subordinate elements deployed at any time throughout the Pacific on exercises, to maintain presence, or engaged in other activities. MARFORPAC is responsible for supporting three different commands: It is the U.S. Marine Corps component of USINDOPACOM, provides the Fleet Marine Forces to PACFLT, and provides Marine forces for U.S. Forces Korea (USFK).
- **U.S. Special Operations Command Pacific.** SOCPAC has operational control of various special operations forces, including Navy SEALs; Naval Special Warfare units; Army Special Forces (Green Berets); and Special Operations Aviation units in the Pacific region, including elements in Japan and South Korea. It supports the Pacific Command’s Theater Security Cooperation Program as well as other plans and contingency responses. SOCPAC forces also support various operations in the region other than warfighting, such as counterdrug operations, counterterrorism training, humanitarian assistance, and demining activities.
- **U.S. Forces Korea and U.S. Eighth Army.** Because of the unique situation on the Korean Peninsula, two subcomponents of USINDOPACOM—U.S. Forces

Korea (USFK) and U.S. Eighth Army—are based in Korea. USFK, a joint headquarters led by a four-star U.S. general, is in charge of the various U.S. military elements on the peninsula. U.S. Eighth Army operates in conjunction with USFK as well as with the United Nations presence in the form of United Nations Command.

Other forces, including space capabilities, cyber capabilities, air and sealift assets, and additional combat forces, may be made available to USINDOPACOM depending on requirements and availability.

U.S. Central Command—Afghanistan. Unlike the U.S. forces deployed in Japan and South Korea, there is no permanent force structure committed to Afghanistan; instead, forces rotate through the theater under the direction of U.S. Central Command (CENTCOM), USINDOPACOM’s counterpart in that region of the world. U.S. forces are in the process of being fully withdrawn from Afghanistan by a September 11, 2021, deadline set by President Biden.

Key Infrastructure That Enables Expeditionary Warfighting Capabilities

Any planning for operations in the Pacific will be dominated by the “tyranny of distance.” Because of the extensive distances that must be traversed in order to deploy forces, even Air Force units will take one or more days to deploy, and ships measure steaming time in weeks. For instance, a ship sailing at 20 knots requires nearly five days to get from San Diego to Hawaii. From there, it takes seven more days to get to Guam; seven days to Yokosuka, Japan; and eight days to Okinawa—if ships encounter no interference along the journey.¹⁰⁷

China’s growing anti-access/area denial (A2/AD) capabilities, ranging from an expanding fleet of modern submarines to anti-ship ballistic and cruise missiles, increase the operational risk for deployment of U.S. forces in the event of conflict. China’s capabilities not only jeopardize American combat forces that would flow into the theater for initial combat,

but also would continue to threaten the logistical support needed to sustain American combat power during the subsequent days, weeks, and months.

American basing structure in the Indo-Pacific region, including access to key allied facilities, is therefore both necessary and increasingly at risk.

American Facilities

Hawaii. Much as it was in the 20th century, Hawaii remains the linchpin of America's ability to support its position in the Western Pacific. If the United States cannot preserve its facilities in Hawaii, both combat power and sustainability become moot. The United States maintains air and naval bases, communications infrastructure, and logistical support on Oahu and elsewhere in the Hawaiian Islands. Hawaii is also a key site for undersea cables that carry much of the world's communications and data, as well as for satellite ground stations.

Guam. The American territory of Guam is located 4,600 miles farther west. Obtained from Spain as a result of the Spanish–American War, Guam became a key coaling station for U.S. Navy ships. It was seized by Japan in World War II, was liberated by U.S. forces in 1944, and after the war became an unincorporated, organized territory of the United States. Key U.S. military facilities on Guam include U.S. Naval Base Guam, which houses several attack submarines and possibly a new aircraft carrier berth, and Andersen Air Force Base, one of a handful of facilities that can house B-2 bombers. U.S. task forces can stage out of Apra Harbor, drawing weapons from the Ordnance Annex in the island's South Central Highlands. There is also a communications and data relay facility on the island.

Guam's facilities have improved steadily over the past 20 years. B-2 bombers, for example, began to operate from Andersen Air Force Base in March 2005.¹⁰⁸ These improvements have been accelerated and expanded even as China's A2/AD capabilities have raised doubts about the ability of the U.S. to sustain operations in the Asian littoral. The concentration

of air and naval assets as well as logistical infrastructure, however, makes the island an attractive potential target in the event of conflict. The increasing reach of Chinese and North Korean ballistic missiles reflects this growing vulnerability.

Guam and Saipan. The U.S. military has noncombatant maritime prepositioning ships (MPS), which contain large amounts of military equipment and supplies, in strategic locations from which they can reach areas of conflict relatively quickly as associated U.S. Army or Marine Corps units located elsewhere arrive in the areas. U.S. Navy units on Guam and in Saipan, Commonwealth of the Northern Marianas, support prepositioning ships that can supply Army or Marine Corps units deployed for contingency operations in Asia.

Allied and Other Friendly Facilities

For the United States, access to bases in Asia has long been a vital part of its ability to support military operations in the region. Even with the extensive aerial refueling and replenishment skills of the U.S. Air Force and U.S. Navy, it is still essential for the United States to retain access to resupply and replenishment facilities, at least in peacetime. The ability of those facilities to survive and function will directly influence the course of any conflict in the Western Pacific region. Moreover, a variety of support functions, including communications, intelligence, and space support, cannot be accomplished without facilities in the region.

Today, maintaining maritime domain awareness or space situational awareness would be extraordinarily difficult without access to facilities in the Asia–Pacific region. The American alliance network is therefore a matter both of political partnership and of access to key facilities on allied soil.

Japan. In Japan, the United States has access to over 100 different facilities, including communications stations, military and dependent housing, fuel and ammunition depots, and weapons and training ranges in addition to such major bases as the air bases at Misawa, Yokota, and Kadena and naval facilities at

Yokosuka, Atsugi, and Sasebo. The naval facilities support the USS *Ronald Reagan* carrier strike group (CSG), which is home-ported in Yokosuka, and a Marine Expeditionary Strike Group (ESG) centered on the USS *America*, home-ported at Sasebo. The skilled workforce at places like Yokosuka is needed to maintain American forces and repair equipment in time of conflict. Replacing them would take years, if not decades.

This combination of facilities and workforce, in addition to physical location and political support, makes Japan an essential part of any American military response to contingencies in the Western Pacific. Japanese financial support for the American presence also makes these facilities some of the most cost-effective in the world.

The status of one critical U.S. base has been a matter of public debate in Japan for many years. The U.S. Marine Corps' Third Marine Expeditionary Force, based on Okinawa, is the U.S. rapid reaction force in the Pacific. The Marine Air-Ground Task Force, comprised of air, ground, and logistics elements, enables quick and effective response to crises or humanitarian disasters. To improve the political sustainability of U.S. forces by reducing the impact on the local population in that densely populated area, the Marines are relocating some units to Guam and less-populated areas of Okinawa. The latter includes moving a helicopter unit from Futenma to a new facility in a more remote location in northeastern Okinawa. Because of local resistance, construction of the Futenma Replacement Facility at Camp Schwab will not be complete until at least 2025, but the U.S. and Japanese governments have affirmed their support for the project.

South Korea. The United States also maintains an array of facilities in South Korea. The Army's footprint in South Korea is larger than its footprint in Japan because the United States and South Korea remain focused on deterring North Korean aggression and preparing for any possible North Korean contingencies. The Army maintains four major facilities (which in turn control a number of smaller

sites) at Daegu, Yongsan in Seoul, and Camps Red Cloud/Casey and Humphreys. These facilities support the U.S. 2nd Infantry Division, which is based in South Korea. Other key facilities include air bases at Osan and Kunsan and a naval facility at Chinhae near Pusan.

The Philippines. In 1992, the United States ended a nearly century-long presence in the Philippines when it withdrew from its base in Subic Bay as its lease ended. The eruption of Mount Pinatubo had already forced the closure of Clark Air Base; the costs of repairing the facility were deemed too high to be worthwhile. In 2014, however, spurred by China's growing assertiveness in the South China Sea, including against Philippine claims such as Mischief Reef (seized in 1995) and Scarborough Shoal (2012), the U.S. and the Philippines negotiated the Enhanced Defense Cooperation Agreement, which allowed for the rotation of American forces through Philippine military bases.

In 2016, the two sides agreed on an initial list of five bases to be used in the Philippines. Geographically distributed across the country, they are Antonio Bautista Air Base in Palawan, closest to the Spratlys; Basa Air Base on the main island of Luzon and closest to the hotly contested Scarborough Shoal; Fort Magsaysay, also on Luzon and the only facility on the list that is not an air base; Lumbia Air Base in Mindanao, where Manila remains in low-intensity combat with Islamist insurgents; and Mactan-Benito Ebuen Air Base in the central Philippines.¹⁰⁹ In 2018, construction was completed on a humanitarian assistance and disaster relief warehouse located at Basa Air Base in Pampanga, central Luzon, the main Philippine island.¹¹⁰ American F-16s based in South Korea deployed there for a 12-day exercise with Philippine fighter jets in 2019¹¹¹ and exercised there again in 2020.¹¹²

It remains unclear precisely which additional forces would be rotated through the Philippines as a part of this agreement, which in turn affects the kinds of facilities that would be most needed. The base upgrades and deployments pursuant to the EDCA are part of a broader expansion of U.S.–Philippine defense

ties begun under the Aquino government and continued under President Duterte with some adjustments. At the time this book was being prepared, the extent of U.S.–Philippines military cooperation, including implementation of the EDCA, was in doubt as a result of Duterte’s on-again, off-again interest in terminating the VFA.

Singapore. The United States does not have bases in Singapore, but it is allowed access to several key facilities that provide essential support for American forward presence. Since the closure of its facilities at Subic Bay, the United States has been allowed to operate the principal logistics command for the Seventh Fleet out of the Port of Singapore Authority’s Sembawang Terminal. The U.S. Navy also has access to Changi Naval Base, one of the few docks in the world that can handle a 100,000-ton American aircraft carrier. A small U.S. Air Force contingent operates out of Paya Lebar Air Base to support U.S. Air Force combat units visiting Singapore and Southeast Asia, and Singapore hosts Littoral Combat Ships (LCS) and rotating P-8 aircraft.¹¹³

Australia. The most prominent element of the U.S. presence in Australia is the deployment of U.S. Marines to Darwin in northern Australia. In keeping with Australian sensitivities about permanent American bases on Australian soil, the Marines do not constitute a permanent presence in Australia.¹¹⁴ Similarly, the United States jointly staffs the Joint Defence Facility Pine Gap and the Joint Geological and Geophysical Research Station at Alice Springs and has access to the Harold E. Holt Naval Communication Station, including its space surveillance radar system, in the western part of the country.¹¹⁵

Finally, the United States is granted access to a number of facilities in Asian states on a contingency or crisis basis. Thus, U.S. Air Force units transited Thailand’s U-Tapao Air Base and Sattahip Naval Base during the first Gulf War and during the Iraq War, but they do not maintain a permanent presence there. Additionally, the U.S. Navy conducts hundreds of port calls throughout the region.

Diego Garcia. The American facilities on the British territory of Diego Garcia are vital to U.S. operations in the Indian Ocean and Afghanistan and provide essential support for operations in the Middle East and East Asia. The island is home to the Military Sealift Command’s Maritime Prepositioning Squadron-2 (MPSRON-2), which works with Maritime Prepositioning Squadron-3 (MPSRON-3) “to deliver a strategic power-projection capability for the Marine Corps, Army and Air Force, known as the Maritime Prepositioning Force (MPF).” Specifically, “MPF ships deliver a forward presence and rapid crisis response capability by pre-positioning equipment and supplies to various locations at sea.”¹¹⁶ Several elements of the U.S. global space surveillance and communications infrastructure, as well as basing facilities for the B-2 bomber, are also located on the island.

Conclusion

The Asian strategic environment is extremely expansive. It includes half the globe and is characterized by a variety of political relationships among states that possess wildly varying capabilities. The region includes long-standing American allies with relationships dating back to the beginning of the Cold War as well as recently established states and some long-standing adversaries such as North Korea.

American conceptions of the region must therefore recognize the physical limitations imposed by the tyranny of distance. Moving forces within the region (never mind to it) will take time and require extensive strategic lift assets as well as sufficient infrastructure, such as sea and aerial ports of debarkation that can handle American strategic lift assets, and political support. At the same time, the complicated nature of intra-Asian relations, especially unresolved historical and territorial issues, means that the United States, unlike Europe, cannot necessarily count on support from all of its regional allies in responding to any given contingency.

Scoring the Asia Operating Environment

As with the operating environments of Europe and the Middle East, we assessed the characteristics of Asia as they could be expected to facilitate or inhibit America's ability to conduct military operations to defend its vital national interests against threats. Our assessment of the operating environment utilized a five-point scale that ranges from "very poor" to "excellent" conditions and covers four regional characteristics of greatest relevance to the conduct of military operations:

1. **Very Poor.** Significant hurdles exist for military operations. Physical infrastructure is insufficient or nonexistent, and the region is politically unstable. The U.S. military is poorly placed or absent, and alliances are nonexistent or diffuse.
2. **Unfavorable.** A challenging operating environment for military operations is marked by inadequate infrastructure, weak alliances, and recurring political instability. The U.S. military is inadequately placed in the region.
3. **Moderate.** A neutral to moderately favorable operating environment is characterized by adequate infrastructure, a moderate alliance structure, and acceptable levels of regional political stability. The U.S. military is adequately placed.
4. **Favorable.** A favorable operating environment includes good infrastructure, strong alliances, and a stable political environment. The U.S. military is well placed for future operations.
5. **Excellent.** An extremely favorable operating environment includes well-established and well-maintained infrastructure, strong and capable allies, and a stable political environment. The U.S. military is exceptionally well placed to defend U.S. interests.

The key regional characteristics consisted of:

- a. **Alliances.** Alliances are important for interoperability and collective defense, as allies would be more likely to lend support to U.S. military operations. Indicators that provide insight into the strength or health of an alliance include whether the U.S. trains regularly with countries in the region, has good interoperability with the forces of an ally, and shares intelligence with nations in the region.
- b. **Political Stability.** Political stability brings predictability for military planners when considering such things as transit, basing, and overflight rights for U.S. military operations. The overall degree of political stability indicates whether U.S. military actions would be hindered or enabled and reflects, for example, whether transfers of power in the region are generally peaceful and whether there have been any recent instances of political instability in the region.
- c. **U.S. Military Positioning.** Having military forces based or equipment and supplies staged in a region greatly facilitates the ability of the United States to respond to crises and, presumably, achieve successes in critical "first battles" more quickly. Being routinely present also helps the United States to maintain familiarity with a region's characteristics and the various actors that might act to assist or thwart U.S. actions. With this in mind, we assessed whether or not the U.S. military was well positioned in the region. Again, indicators included bases, troop presence, prepositioned equipment, and recent examples of military operations (including training and humanitarian) launched from the region.

d. Infrastructure. Modern, reliable, and suitable infrastructure is essential to military operations. Airfields, ports, rail lines, canals, and paved roads enable the U.S. to stage, launch operations from, and logistically sustain combat operations. We combined expert knowledge of regions with publicly available information on critical infrastructure to arrive at our overall assessment of this metric.¹¹⁷

For Asia, we arrived at these average scores (rounded to the nearest whole number):

- Alliances: **4—Favorable**
- Political Stability: **3—Moderate**
- U.S. Military Positioning: **4—Favorable**
- Infrastructure: **4—Favorable**

Aggregating to a regional score of: **Favorable**

Operating Environment: Asia

	VERY POOR	UNFAVORABLE	MODERATE	FAVORABLE	EXCELLENT
Alliances				✓	
Political Stability			✓		
U.S. Military Posture				✓	
Infrastructure				✓	
OVERALL				✓	

Endnotes

1. Table, "March Total Trade," in U.S. Department of Commerce, U.S. Census Bureau, "Foreign Trade: Top Trading Partners—March 2021," <https://www.census.gov/foreign-trade/statistics/highlights/top/top2103cm.html> (accessed May 5, 2021).
2. "Aspiring sincerely to an international peace based on justice and order, the Japanese people forever renounce war as a sovereign right of the nation and the threat or use of force as means of settling international disputes. In order to accomplish the aim of the preceding paragraph, land, sea, and air forces, as well as other war potential, will never be maintained. The right of belligerency of the state will not be recognized." Constitution of Japan, Article 9, promulgated November 3, 1946, came into effect May 3, 1947, http://japan.kantei.go.jp/constitution_and_government_of_japan/constitution_e.html (accessed June 20, 2021).
3. U.S. Forces, Japan, "About USFJ: Guidance from the Commander, U.S. Forces Japan," <https://www.usfj.mil/About-USFJ/> (accessed June 20, 2021).
4. Emma Chanlett-Avery, Mark E. Manyin, Brock R. Williams, and Cathleen D. Cimino-Isaacs "U.S.–Japan Relations," Congressional Research Service *In Focus* No. 10199, updated May 12, 2021, <https://fas.org/sgp/crs/row/IF10199.pdf> (accessed June 20, 2021).
5. Bruce Klingner, James Jay Carafano, and Walter Lohman, "Don't Break Alliances over Money," *The National Interest*, Korea Watch Blog, November 22, 2019, <https://nationalinterest.org/blog/korea-watch/don-t-break-alliances-over-money-98967> (accessed June 20, 2021).
6. Bruce Klingner, Jung Pak, and Sue Mi Terry, "Opinion: Trump Shakedowns Are Threatening Two Key U.S. Alliances in Asia," *Los Angeles Times*, December 16, 2019, <https://www.latimes.com/opinion/story/2019-12-16/how-trump-is-threatening-alliances-in-asia> (accessed June 20, 2021).
7. Bruce Klingner and Riley Walters, "The U.S. Must Limit Damage from the Japan–South Korea Trade Dispute," Heritage Foundation *Backgrounders* No. 3429, August 7, 2019, <https://www.heritage.org/asia/report/the-us-must-limit-damage-the-japan-south-korea-trade-dispute>.
8. Bruce Klingner, "Enhance South Korean Military Capabilities Before OPCON Transfer," Heritage Foundation *Backgrounders* No. 3452, December 2, 2019, <https://www.heritage.org/asia/report/enhance-south-korean-military-capabilities-opcon-transfer>.
9. NPR, "President Trump's Press Conference on North Korea Summit, Annotated," June 12, 2018, <https://www.npr.org/2018/06/12/619192513/president-trumps-press-conference-on-north-korea-summit-annotated> (accessed June 20, 2021).
10. Klingner, Carafano, and Lohman, "Don't Break Alliances over Money."
11. 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, *Overseas Contingency Operations: Operation Inherent Resolve, Operation Pacific Eagle–Philippines*, Lead Inspector General Report to the United States Congress, October 1, 2017–December 31, 2017, pp. 99–100, https://media.defense.gov/2018/Jun/18/2001932643/-1/-1/1/FY2018_LIG_OCO_OIR_Q1_12222017_2.PDF (accessed June 20, 2020).
12. U.S. Department of Defense, Office of Inspector General; U.S. Department of State, Office of Inspector General; and U.S. Agency for National Development, Office of Inspector General, *Operation Pacific Eagle–Philippines*, Lead Inspector General Report to the United States Congress, July 1, 2020–September 30, 2020, p. 4, <https://www.oversight.gov/sites/default/files/oig-reports/LEAD%20INSPECTOR%20GENERAL%20FOR%20OPERATION%20PACIFIC%20EAGLE-PHILIPPINES%20JULY%201%2C%202020%20-%20SEPTEMBER%2030%2C%202020.pdf> (accessed June 20, 2021). "Under...the Inspector General Act, the Lead IG agencies cease quarterly reporting when the appropriations for an overseas contingency operation drop below \$100 million in a fiscal year. In 2019, the Secretary of Defense rescinded the overseas contingency operation designation for OPE-P.... FY 2020 appropriations for OPE-P were less than \$100 million. As a result, our Lead IG reporting responsibilities reached sunset at the end of FY 2020, and this is our final report." Sean W. O'Donnell, Acting Inspector General, U.S. Department of Defense; Matthew S. Klimow, Acting Inspector General, U.S. Department of State; and Ann Calvaresi Barr, Inspector General, Agency for International Development, "Foreword" in *ibid.*, n.p. "Although OPE-P no longer meets the statutory threshold for Lead IG reporting after FY 2020," however, "U.S. counterterrorism operations will continue. SOCPAC stated that OPE-P will remain important to addressing 'internal security challenges within the Philippines for the foreseeable future.'" "Enduring Challenges for Counterterrorism Operations in the Philippines," in *ibid.*, p. 12.
13. Walter Lohman, "Scarborough Shoal and Safeguarding American Interests," Heritage Foundation *Issue Brief* No. 3603, May 14, 2012, p. 2, <http://www.heritage.org/research/reports/2012/05/south-china-sea-dispute-between-china-and-the-philippines-safeguarding-americas-interests>.
14. Press release, "Secretary Blinken's Call with Philippine Secretary of Foreign Affairs Locsin," U.S. Department of State, April 8, 2021, <https://www.state.gov/secretary-blinkens-call-with-philippine-secretary-of-foreign-affairs-locsin-2/> (accessed June 20, 2021), and press release, "Secretary Blinken's Call with Philippine Secretary of Foreign Affairs Locsin," U.S. Department of State, January 27, 2021, <https://www.state.gov/secretary-blinkens-call-with-philippine-secretary-of-foreign-affairs-locsin/> (accessed June 20, 2021).

2021). See also former Secretary of State Michael Pompeo's remarks in transcript, "Remarks with Philippine Foreign Secretary Teodoro Locsin, Jr. at a Press Availability," Manila, Philippines, March 1, 2019, <https://2017-2021.state.gov/remarks-with-philippine-foreign-secretary-teodoro-locsin-jr/index.html> (accessed June 20, 2020).

15. Named for Thai Foreign Minister Thanat Khoman and U.S. Secretary of State Dean Rusk.
16. "2012 Joint Vision Statement for the Thai–U.S. Defense Alliance," Bangkok, Thailand, November 15, 2012, in *Bangkok Post*, November 16, 2012, <https://www.bangkokpost.com/world/321551/text-of-thailand-us-joint-vision-statement> (accessed June 20, 2021).
17. 1st Lt. Timothy Hayes, "Cobra Gold 20: Opening Ceremony," U.S. Indo-Pacific Command, February 25, 2020, <https://www.pacom.mil/Media/News/News-Article-View/Article/2094057/cobra-gold-20-opening-ceremony/> (accessed June 20, 2021).
18. 1st Lt. Timothy Hayes, "Cobra Gold 20: The 39th Iteration of Cobra Gold Concludes with a Combined Arms-Live Fire Exercise and Closing Ceremony," U.S. Army, March 6, 2020, https://www.army.mil/article/233549/cobra_gold_20_the_39th_iteration_of_cobra_gold_concludes_with_a_combined_arms_live_fire_exercise_and_closing_ceremony (accessed June 20, 2021).
19. Kyodo News, "Cobra Gold Joint Drills Kick Off amid Precautions for Coronavirus," February 25, 2020, <https://english.kyodonews.net/news/2020/02/2ad959647415-cobra-gold-joint-drills-kick-off-amid-precautions-for-coronavirus.html> (accessed June 20, 2021).
20. Reuters, "US Approves Sale of Black Hawk Helicopters to Thailand—Army Chief," June 29, 2017, <https://www.reuters.com/article/usa-thailand/us-approves-sale-of-black-hawk-helicopters-to-thailand-army-chief-idUSL3N1JQ38D> (accessed June 20, 2021).
21. Mike Yeo, "Thailand Approved to Acquire Stryker Infantry Carriers," *Defense News*, July 29, 2019, <https://www.defensenews.com/global/asia-pacific/2019/07/29/thailand-approved-to-acquire-stryker-infantry-carriers/> (accessed June 21, 2020), and Aaron Mehta, "US Clears Attack Helicopters for Thailand, Plane Defenses for Qatar," *Defense News*, September 24, 2019, <https://www.defensenews.com/global/asia-pacific/2019/09/24/us-clears-attack-helicopters-for-thailand-plane-defenses-for-qatar/> (accessed June 21, 2021).
22. Michael George DeSombre, "America's Oldest Asian Ally, Overlooked," *The Wall Street Journal*, April 9, 2021, <https://www.wsj.com/articles/americas-oldest-asian-ally-overlooked-11618007869> (accessed June 21, 2021).
23. Phuong Nguyen and Brittany Billingsley, "China's Growing Military-to-Military Engagement with Thailand & Myanmar," Center for Strategic and International Studies, Asia Program, cogitASIA blog, September 12, 2013, <http://cogitasia.com/chinas-growing-military-to-military-engagement-with-thailand-and-myanmar/> (accessed June 21, 2021); Patpicha Tanakasempipat and Jutarat Skulpichetrat, "China, Thailand Joint Air Force Exercise Highlights Warming Ties," Reuters, November 14, 2015, <https://uk.reuters.com/article/uk-china-thailand-military-idUKKBN0TDOC20151124> (accessed June 21, 2021); and Ian Storey, "Thailand's Military Relations with China; Moving from Strength to Strength," Yusof Ishak Institute *Perspective*, Issue: 2019, No. 43, May 27, 2019, https://www.iseas.edu.sg/images/pdf/ISEAS_Perspective_2019_43.pdf (accessed June 21, 2021).
24. Zachary Abuza, "America Should Be Realistic About Its Alliance with Thailand," War on the Rocks, January 2, 2020, <https://warontherocks.com/2020/01/america-should-be-realistic-about-its-alliance-with-thailand/> (accessed June 21, 2021).
25. Ibid. and Mike Yeo, "Thailand to Buy More Chinese Tanks, Reportedly for \$58M," *Defense News*, April 4, 2017, <http://www.defensenews.com/articles/thailand-to-buy-more-chinese-tanks-reportedly-for-58m> (accessed June 21, 2021), and Reuters, "Thailand in \$67-Million Deal to Buy Armored Personnel Carriers from China," June 14, 2017, <https://www.reuters.com/article/us-thailand-china-defence-idUSKBN1950IH> (accessed June 21, 2021).
26. Stockholm International Peace Research Institute, "SIPRI Arms Transfers Database: Trade Registers: Transfers of Major Weapons: Deals with Deliveries or Orders Made for 2006 to 2020," <https://armstrade.sipri.org/armstrade/page/values.php> (accessed June 21, 2021). Data for Thailand are a product of user query whereby the country and years of interest are selected. Query results generate a table that shows countries supplying arms to Thailand. The top five include Sweden, China, Ukraine, South Korea, and the U.S. in descending order.
27. Masayuki Yuda, "Thailand Shelves Chinese Submarine Deal After Public Backlash," *Nikkei Asia*, August 31, 2020, <https://asia.nikkei.com/Politics/Turbulent-Thailand/Thailand-shelves-Chinese-submarine-deal-after-public-backlash> (accessed June 21, 2021).
28. William Cole, "Marine Corps Rotation to Australia Continues amid COVID Concerns," *Honolulu Star-Advertiser*, April 26, 2021, <https://www.staradvertiser.com/2021/04/26/hawaii-news/marine-corps-rotation-to-australia-continues-amid-covid-concerns/> (accessed June 21, 2021).
29. Gina Harkins, "Australia Will Invest Millions to Upgrade Military Sites Where US Marines Train," Military.com, April 29, 2021, <https://www.military.com/daily-news/2021/04/29/australia-will-invest-millions-upgrade-military-sites-where-us-marines-train.html> (accessed June 21, 2021).

30. Australian Government, Department of Defence, "United States Force Posture Initiatives: Background," <https://www.defence.gov.au/Initiatives/USFPI/Home/Background.asp> (accessed June 21, 2021).
31. Seth Robson, "US, Australia Plan to Carry on with Massive Talisman Sabre Exercise Despite Pandemic," *Stars and Stripes*, January 28, 2021, <https://www.stripes.com/news/pacific/us-australia-plan-to-carry-on-with-massive-talisman-sabre-exercise-despite-pandemic-1.660096> (accessed June 21, 2021).
32. Embassy of Australia, "Australia and the United States: Australia–US Defence Relationship," <https://usa.embassy.gov.au/defence-cooperation> (accessed June 21, 2021).
33. Australian Government, Department of Foreign Affairs and Trade, "Countries, Economies and Regions: United States of America: AUSMIN—Australia–United States Ministerial Consultations," <https://dfat.gov.au/geo/united-states-of-america/ausmin/Pages/ausmin-australia-united-states-ministerial-consultations.aspx> (accessed June 21, 2021).
34. Kim Beazley, "Pine Gap at 50: The Paradox of a Joint Facility," Australian Strategic Policy Institute, *The Strategist*, August 30, 2017, <https://www.aspistrategist.org.au/pine-gap-50-paradox-joint-facility/> (accessed June 21, 2021).
35. Stephen Smith, Minister of Defence and Deputy Leader of the House, Ministerial Statement on "Full Knowledge and Concurrence," Commonwealth of Australia, Parliamentary Debates, House of Representatives, June 26, 2013, pp. 7071–7075, http://parlinfo.aph.gov.au/parlInfo/genpdf/chamber/hansardr/4d60a662-a538-4e48-b2d8-9a97b8276c77/0016/hansard_frag.pdf;fileType=application%2Fpdf (accessed June 21, 2021).
36. U.S. Department of State, "Fact Sheet: U.S. Defense Trade Cooperation Treaties with the United Kingdom and Australia," September 30, 2010, <https://2009-2017.state.gov/r/pa/prs/ps/2010/09/148478.htm> (accessed June 21, 2021), and U.S. Department of Defense, Office of the Under Secretary of Defense for Acquisition and Sustainment, Office of the Executive Director for International Cooperation, "Defense Trade Cooperation Treaties," <https://www.acq.osd.mil/ic/DTCT.html> (accessed June 21, 2021).
37. "Joint Statement by President Trump and Prime Minister Lee Hsien Loong of Singapore," October 24, 2017, <https://sg.usembassy.gov/remarks-president-trump-prime-minister-lee-singapore-joint-statements-october-23-2017/> (accessed June 21, 2021).
38. Valerie Insinna, "Singapore Gets the Green Light to Buy F-35s," *Defense News*, January 9, 2020, <https://www.defensenews.com/air/2020/01/09/singapore-gets-the-green-light-to-buy-f-35s/> (accessed June 21, 2021), and Mike Yeo, "Singapore Moves to Buy Four F-35s, Possibly Eight More Afterward," *Defense News*, March 1, 2019, <https://www.defensenews.com/digital-show-dailies/avalon/2019/03/01/singapore-moves-to-buy-four-f-35s-possibly-eight-more-afterward/> (accessed June 21, 2021).
39. Mike Yeo and Valerie Insinna, "Singapore Requests Future F-35 Training Location also Host Its F-16 Jets," *Defense News*, July 22, 2020, <https://www.defensenews.com/training-sim/2020/07/22/singapore-requests-new-f-35-training-location-also-host-its-f-16-jets/> (accessed June 21, 2021).
40. Mike Yeo, "Singapore to Launch Fighter Jet Training Detachment on Guam," *Defense News*, December 9, 2019, <https://www.defensenews.com/smr/reagan-defense-forum/2019/12/09/singapore-to-launch-fighter-jet-training-detachment-on-guam/> (accessed June 21, 2021).
41. See "Text of the Wellington Declaration," November 5, 2010, <http://usnzcouncil.org/us-nz-issues/wellington-declaration/> (accessed June 21, 2021), and "Text of the Washington Declaration on Defense Cooperation Between the Department of Defense of the United States of America and the Ministry of Defense of New Zealand and the New Zealand Defense Force," June 19, 2012, <http://usnzcouncil.org/us-nz-issues/washington-declaration/> (accessed June 21, 2021).
42. U.S. Department of Defense, Defense Security Cooperation Agency, "U.S., New Zealand Announce Expanded Defense Cooperation," October 28, 2013, <https://www.dsca.mil/news-media/news-archive/us-new-zealand-announce-expanded-defense-cooperation> (accessed June 21, 2021), and David B. Larter, "In Port Visit, New Zealand and U.S. Seek to Bolster Military Ties," *Navy Times*, July 22, 2016, <http://www.navytimes.com/story/military/2016/07/22/port-visit-new-zealand-and-us-seek-bolster-military-ties/87450022/> (accessed June 21, 2021).
43. Associated Press, "US Warship to Visit New Zealand as USS Sampson's Arrival Ends Stalemate on Nuclear Vessels," ABC [Australian Broadcasting Corporation] News, October 18, 2016, <http://www.abc.net.au/news/2016-10-18/new-zealand-to-end-stalemate-on-us-warships/7943252> (accessed June 21, 2021).
44. Taiwan Relations Act, Public Law 96-8, 96th Cong., approved April 10, 1979, Section 2, <https://www.ait.org.tw/our-relationship/policy-history/key-u-s-foreign-policy-documents-region/taiwan-relations-act/> (accessed June 21, 2021). Section 18 specifies that "This Act shall be effective as of January 1, 1979."
45. *Ibid.*, Section 3.
46. *Ibid.*, Section 2.

47. Ibid., Section 3.
48. Shirley A. Kan, “China/Taiwan: Evolution of the ‘One China’ Policy—Key Statements from Washington, Beijing, and Taipei,” Congressional Research Service *Report for Members and Committees of Congress* No. RL30341, October 10, 2014, pp. 43–44, <https://www.fas.org/sgp/crs/row/RL30341.pdf> (accessed June 21, 2021). Emphasis in original.
49. Aaron Mehta, “New US–Vietnam Agreement Shows Growth, Challenges,” *Defense News*, June 1, 2015, <http://www.defensenews.com/story/defense/policy-budget/budget/2015/06/01/us-vietnam-joint-vision-statement-signed-in-hanoi/28291963/> (accessed June 21, 2021), and “Joint Statement: Between the United States of America and the Socialist Republic of Vietnam,” U.S. Embassy and Consulate in Vietnam, November 13, 2017, <https://vn.usembassy.gov/20171112-joint-statement-united-states-america-socialist-republic-viet-nam/> (accessed June 21, 2021).
50. Media Note, “U.S. Security Cooperation with Vietnam,” U.S. Department of State, August 16, 2018, <https://2017-2021.state.gov/u-s-security-cooperation-with-vietnam/index.html> (accessed June 21, 2021).
51. Mike Yeo, “Asia-Pacific Militaries Bet on Unmanned Systems to Meet Regional Challenges,” *Defense News*, November 30, 2020, <https://www.defensenews.com/unmanned/2020/11/30/asia-pacific-militaries-bet-on-unmanned-systems-to-meet-regional-challenges/> (accessed June 21, 2021).
52. Valerie Mai, “US Air Force Called Bid to Provide 3 Training Aircrafts to Vietnam,” *Vietnam Times*, February 20, 2021, <https://vietnamtimes.org.vn/us-air-force-called-bid-to-provide-3-training-aircrafts-to-vietnam-28357.html> (accessed June 21, 2021).
53. “Joint Statement: Between the United States of America and the Socialist Republic of Vietnam,” The White House, May 23, 2016, <https://obamawhitehouse.archives.gov/the-press-office/2016/05/23/joint-statement-between-united-states-america-and-socialist-republic> (accessed June 21, 2021).
54. Wyatt Olson, “Winnowed in Scope by Coronavirus, a Smaller RIMPAC Maritime Exercise Begins Monday,” *Stars and Stripes*, August 13, 2020, <https://www.stripes.com/news/pacific/winnowed-in-scope-by-coronavirus-a-smaller-rimpac-maritime-exercise-begins-monday-1.641263> (accessed June 21, 2021).
55. Socialist Republic of Viet Nam, Ministry of National Defence, *2019 Viet Nam National Defence*, October 2019, <http://www.mod.gov.vn/wps/wcm/connect/08963129-c9cf-4c86-9b5c-81a9e2b14455/2019VietnamNationalDefence.pdf?MOD=AJPERES&CACHEID=08963129-c9cf-4c86-9b5c-81a9e2b14455> (accessed June 21, 2021).
56. [Name redacted], “Malaysia: Background and U.S. Relations,” Congressional Research Service *Report for Members and Committees of Congress* No. R43505, May 18, 2017, pp. 9–10, https://www.everycrsreport.com/files/20170518_R43505_025187722d007dc55f7f86a9a6ea62e4985d07b3.pdf (accessed June 21, 2021).
57. Bernama [Malaysian National News Agency], “US Committed to Stronger Defence Ties with Malaysia,” *Malay Mail*, July 10, 2020, <https://www.malaymail.com/news/malaysia/2020/07/10/us-committed-to-stronger-defence-ties-with-malaysia/1883290> (accessed June 24, 2021).
58. U.S. Embassy in Malaysia, “Office of Defense Cooperation,” <https://my.usembassy.gov/embassy/government-agencies/office-of-defense-cooperation/> (accessed June 21, 2021), and “Malaysian F/A-18D Hornet Fleet to Undergo Depot Maintenance and Upgrade in Australia,” *Asia Pacific Defense Journal*, February 19, 2020, <https://www.asiapacificdefensejournal.com/2020/02/malaysian-fa-18d-hornet-fleet-to.html> (accessed June 21, 2021).
59. News release, “Joint Statement Between the Ministry of Defense of the Republic of Indonesia and the Department of Defense of the United States of America,” U.S. Department of Defense, May 31, 2019, <https://www.defense.gov/Newsroom/Releases/Release/Article/1863375/joint-statement-between-the-ministry-of-defense-of-the-republic-of-indonesia-an/> (accessed June 21, 2021).
60. U.S. Department of Defense, *The Department of Defense Indo-Pacific Strategy Report: Preparedness, Partnerships and Promoting a Networked Region*, June 1, 2019, p. 37, <https://media.defense.gov/2019/Jul/01/2002152311/-1/-1/1/DEPARTMENT-OF-DEFENSE-INDO-PACIFIC-STRATEGY-REPORT-2019.PDF> (accessed June 21, 2021).
61. Fact Sheet, “U.S. Security Cooperation with Indonesia,” U.S. Department of State, Bureau of Political-Military Affairs, March 23, 2021, <https://www.state.gov/u-s-security-cooperation-with-indonesia/> (accessed June 21, 2021).
62. Sebastian Strangio, “Indonesia Primed for US Fighter Jet Sale: Report,” *The Diplomat*, December 10, 2020, <https://thediplomat.com/2020/12/indonesia-primed-for-us-fighter-jet-sale-report/> (accessed June 21, 2021), and John A. Tirpak, “Indonesia Could Be First Non-USAF Customer for F-15EX,” *Air Force Magazine*, February 19, 2021, <https://www.airforcemag.com/indonesia-could-be-first-non-usaf-customer-for-f-15ex/> (accessed June 21, 2021).
63. U.S. Department of Defense, *Enhancing Security and Stability in Afghanistan*, December 2016, p. 33, <https://dod.defense.gov/Portals/1/Documents/pubs/Afghanistan-1225-Report-December-2016.pdf> (accessed June 21, 2021).

64. "Remarks by President Biden on the Way Forward in Afghanistan," The White House, April 14, 2021, <https://www.whitehouse.gov/briefing-room/speeches-remarks/2021/04/14/remarks-by-president-biden-on-the-way-forward-in-afghanistan/> (accessed June 24, 2021).
65. Natasha Turak and Amanda Macias, "Ousted Afghan President Ashraf Ghani Resurfaces in UAE After Fleeing Kabul, Emirati Government Says," CNBC, August 18, 2021, <https://www.cnbc.com/2021/08/18/afghan-president-ashraf-ghani-is-in-uae-after-fleeing-afghanistan.html> (accessed September 11, 2021).
66. 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).
67. Yaroslav Trofimov, "Taliban Unveil New Afghan Government," *The Wall Street Journal*, updated September 7, 2021, <https://www.wsj.com/articles/taliban-crack-down-on-protest-led-by-women-in-kabul-11631014019> (accessed September 11, 2021).
68. Nahal Toosi, "Pakistan Terrorism Crackdown 'Necessary' to Trump's Afghanistan Strategy," *Politico*, August 22, 2017, <https://www.politico.com/story/2017/08/22/pakistan-terrorism-crackdown-necessary-to-trumps-afghanistan-strategy-241885> (accessed June 21, 2021).
69. Table, "Direct Overt U.S. Aid Appropriations for and Military Reimbursements to Pakistan, FY2002–FY2020," Prepared by the Congressional Research Service for distribution to multiple congressional offices, March 12, 2019, <https://fas.org/sgp/crs/row/pakaid.pdf> (accessed June 21, 2021). DOD's "FY 2021 budget request for support for coalition forces," however, "includes \$180 million for the Coalition Support Fund (CSF).... The FY 2021 CSF request of \$180 million reflects a \$45 million (20 percent) decrease from the FY 2020 enacted level of \$225 million due to the continuing suspension of U.S. security assistance to Pakistan based on the President's January 4, 2018, guidance." U.S. Department of Defense, Office of the Under Secretary of Defense (Comptroller)/Chief Financial Officer, *United States Department of Defense Fiscal Year 2021 Budget Request: Defense Budget Overview*, revised May 13, 2020, p. 6–6, https://comptroller.defense.gov/Portals/45/Documents/defbudget/fy2021/fy2021_Budget_Request_Overview_Book.pdf (accessed June 21, 2021).
70. Table, "Direct Overt U.S. Aid Appropriations for and Military Reimbursements to Pakistan, FY2002–FY2020," note g.
71. Press statement by Michael R. Pompeo, U.S. Secretary of State, "United States Takes Action Against Violators of Religious Freedom," U.S. Mission to International Organizations in Geneva, December 20, 2019, <https://geneva.usmission.gov/2019/12/20/united-states-takes-action-against-violators-of-religious-freedom/> (accessed June 21, 2021).
72. Reuters, "Global Money Laundering Watchdog Keeps Pakistan on Terrorism Financing 'Grey List,'" February 25, 2021, <https://www.reuters.com/world/asia-pacific/global-money-laundering-watchdog-keeps-pakistan-terrorism-financing-grey-list-2021-02-25/> (accessed June 21, 2021).
73. Institute for Conflict Management, South Asia Terrorism Portal, "Datasheet—Pakistan: Number of Terrorism Related Incidents Year Wise," 2000–2021, <https://www.satp.org/datasheet-terrorist-attack/incidents-data/pakistan> (accessed June 21, 2021). Data as of June 19, 2021.
74. Ibid.
75. Daud Khattak, "The Pakistani Taliban Is Back," *The Diplomat*, March 9, 2021, <https://thediplomat.com/2021/03/the-pakistani-taliban-is-back/> (accessed June 21, 2021).
76. Institute for Conflict Management, South Asia Terrorism Portal, "Datasheet—Pakistan: Yearly Fatalities," 2000–2021, <https://www.satp.org/datasheet-terrorist-attack/fatalities/pakistan> (accessed June 21, 2021). Data from March 6, 2000–June 19, 2021.
77. Hans M. Kristensen, Robert S. Norris, and Julia Diamond, "Pakistani Nuclear Forces, 2018," *Bulletin of the Atomic Scientists*, Vol. 74, Issue 5 (September 2018), pp. 346–358, <https://www.tandfonline.com/doi/full/10.1080/00963402.2018.1507796> (accessed June 21, 2021). See also Zeba Siddiqui, "Factbox: India and Pakistan—Nuclear Arsenals and Strategies," Reuters, March 1, 2019, <https://www.reuters.com/article/us-india-kashmir-pakistan-nuclear-factbo/factbox-india-and-pakistan-nuclear-arsenals-and-strategies-idUSKCN1Q1405> (accessed June 21, 2021).
78. Table, "Theft Ranking: Countries with Weapons-Usable Nuclear Materials," in Nuclear Threat Initiative, *NTI Nuclear Security Index, Theft/Sabotage: Building a Framework for Assurance, Accountability, and Action, Fourth Edition*, September 2018, p. 10, https://media.nti.org/documents/NTI_2018_Index_FINAL.pdf (accessed June 21, 2021).
79. Stephen P. Cohen, "The Future of Pakistan," The Brookings Institution, South Asia Initiative, January 2011, p. 51, https://www.brookings.edu/wp-content/uploads/2016/06/01_pakistan_cohen.pdf (accessed June 21, 2021).
80. Associated Press, "Worst Fighting in Years over Disputed Kashmir," CBS News, October 9, 2014, <https://www.cbsnews.com/news/india-pakistan-fighting-kashmir-thousands-civilians-flee-border-violence/> (accessed June 21, 2021).

81. Ralph Ellis, Euan McKirdy, and Harmeet Shah Singh, "Indian Prime Minister Urges Pakistan to Investigate Attack on Military Base," CNN, updated January 5, 2016, <https://www.cnn.com/2016/01/04/asia/india-air-base-gunmen/index.html> (accessed June 21, 2021).
82. Ravi Krishnan Khajuria, "Jammu Army Camp Attack: Two Soldiers Killed as JeM Militants Storm into Sunjuwan Base," *Hindustan Times*, updated February 10, 2018, <https://www.hindustantimes.com/india-news/terrorists-attack-army-camp-in-jammu-soldier-and-daughter-injured/story-20ILSRP8tuSE6UM2nvxt10.html> (accessed June 21, 2021), and BBC News, "Pulwama Attack: Nine Killed in Kashmir Gun Battle," February 18, 2019, <https://www.bbc.com/news/world-asia-india-47275072> (accessed June 21, 2021).
83. Press Trust of India, "Pakistan Court Adjourns Hearing Against Hafiz Saeed in Terror Financing Cases for Indefinite Period in Wake of Coronavirus," *The Economic Times*, last updated April 15, 2020, <https://economictimes.indiatimes.com/news/defence/pakistan-court-adjourns-hearing-against-saeed-in-terror-financing-cases-for-indefinite-period-in-wake-of-coronavirus/articleshow/75160581.cms> (accessed June 21, 2021).
84. Ayaz Gul, "Pakistan Equips Military with Tactical Nuke-Capable Missile," Voice of America, January 24, 2019, <https://www.voanews.com/south-central-asia/pakistan-equips-military-tactical-nuke-capable-missile> (accessed June 21, 2021).
85. Joanna Slater, "India Strikes Pakistan in Severe Escalation of Tensions Between Nuclear Rivals," *The Washington Post*, February 26, 2019, https://www.washingtonpost.com/world/pakistan-says-indian-fighter-jets-crossed-into-its-territory-and-carried-out-limited-airstrike/2019/02/25/901f3000-3979-11e9-a06c-3ec8ed509d15_story.html (accessed June 21, 2021).
86. BBC News, "India and Pakistan Blame Each Other over Kashmir Shelling," October 21, 2019, <https://www.bbc.com/news/world-asia-india-50120613> (accessed June 21, 2021).
87. Special Correspondent, "Parliament Proceedings: 5,133 Ceasefire Violations Along LoC Last Year: Government," *The Hindu*, updated February 9, 2021, <https://www.thehindu.com/news/national/parliament-proceedings-46-security-personnel-killed-in-ceasefire-violations-by-pakistan-in-2020-rajnath-singh/article33782464.ece> (accessed June 21, 2021).
88. Government of India, Ministry of Defence, "Joint Statement," February 25, 2021, <https://pib.gov.in/PressReleasePage.aspx?PRID=1700682> (accessed June 21, 2021).
89. "Read: Full Text of Gen Bajwa's Speech at the Islamabad Security Dialogue," *Dawn*, March 18, 2021, <https://www.dawn.com/news/1613207/read-full-text-of-gen-bajwas-speech-at-the-islamabad-security-dialogue> (accessed June 21, 2021).
90. Jeff M. Smith, "Modi 2.0: Navigating Differences and Consolidating Gains in India–U.S. Relations," Heritage Foundation *Backgrounder* No. 3425, August 5, 2019, <https://www.heritage.org/asia/report/modi-20-navigating-differences-and-consolidating-gains-india-us-relations>.
91. Jeff Smith, "Austin Goes to India: An Agenda for India–U.S. Defense Consultations," Heritage Foundation *Issue Brief* No. 6067, March 18, 2021, <https://www.heritage.org/asia/report/austin-goes-india-agenda-india-us-defense-consultations>.
92. International Institute for Strategic Studies, *The Military Balance 2020: The Annual Assessment of Global Military Capabilities and Defence Economics* (London: Routledge, 2020), pp. 158–160 and 280–283.
93. *Ibid.*, pp. 109–110 and 287–289.
94. Marie Yamaguchi, "Japan to Buy Aegis Ashore Missile Defense Systems," *Defense News*, December 19, 2017, <https://www.defensenews.com/land/2017/12/19/japan-to-buy-aegis-ashore-missile-defense-systems/> (accessed June 21, 2021).
95. Masaya Kato, "Japan Stuck with \$1.6bn Bill After Scrapping Aegis Ashore System," *Nikkei Asia*, June 18, 2020, <https://asia.nikkei.com/Politics/International-relations/Japan-stuck-with-1.6bn-bill-after-scrapping-Aegis-Ashore-system> (accessed June 21, 2021), and Kyodo News, "Japan Suspends Plan to Deploy Aegis Ashore Missile Defense System," *The Japan Times*, June 15, 2020, <https://www.japantimes.co.jp/news/2020/06/15/national/japan-halt-deploy-aegis-ashore-missile-defense-system/> (accessed June 21, 2021).
96. Australian Government, Department of Defence, "Operations: Current Operations," <https://www1.defence.gov.au/operations> (accessed June 21, 2021).
97. Table, "Military Expenditure by Country, in Constant (2019) US\$ m., 1988–2019," Stockholm International Peace Research Institute, 2020, <https://www.sipri.org/sites/default/files/Data%20for%20all%20countries%20from%201988%E2%80%932019%20in%20constant%20%282018%29%20USD.pdf> (accessed June 21, 2021).
98. Jeremy Koh, "Made for Singapore: First of Four Custom-Built RSN Submarines Launched in Germany," CNA, updated February 19, 2019, <https://www.channelnewsasia.com/news/custom-submarine-for-singapore-navy-launched-germany-11254318> (accessed June 21, 2021).
99. International Institute for Strategic Studies, *The Military Balance 2021: The Annual Assessment of Global Military Capabilities and Defence Economics* (London: Routledge, 2021), pp. 297–299.

100. Table, "Military Expenditure by Country as Percentage of Gross Domestic Product, 1988–2020," Stockholm International Peace Research Institute, 2021, <https://sipri.org/sites/default/files/Data%20for%20all%20countries%20from%201988%E2%80%932020%20as%20a%20share%20of%20GDP%20%28pdf%29.pdf> (accessed June 21, 2021).
101. Frances Mangosing, "PH, South Korea Discuss Corvettes, Light Fighter Jet Upgrades," *Inquirer.net*, December 16, 2020, <https://globalnation.inquirer.net/192725/ph-south-korea-discuss-corvettes-light-fighter-jet-upgrades> (accessed June 21, 2021).
102. Frances Mangosing, "Philippine Navy's First Brand New Warship Comes Home," *Inquirer.net*, updated May 25, 2020, <https://newsinfo.inquirer.net/1279940/philippine-navys-first-brand-new-warship-comes-home> (accessed June 21, 2021).
103. Government of France, Directorate General for International Relations and Strategy, *France and Security in the Indo-Pacific*, updated May 2019, <https://www.defense.gouv.fr/content/download/532754/9176250/file/France%20and%20Security%20in%20the%20Indo-Pacific%20-%202018.pdf> (accessed June 21, 2021).
104. U.S. Indo-Pacific Command, "About USINDOPACOM," <http://www.pacom.mil/About-USINDOPACOM/> (accessed June 21, 2021).
105. U.S. Indo-Pacific Command, "USINDOPACOM Area of Responsibility," <https://www.pacom.mil/About-USINDOPACOM/USPACOM-Area-of-Responsibility/> (accessed June 25, 2021).
106. MyBaseGuide, "Hawaii—Army Community: Brief History: U.S. Army, Pacific (USARPAC)," April 14, 2020, <https://mybaseguide.com/installation/hawaii-army/community/brief-history-6/> (accessed June 24, 2021).
107. These steaming times were calculated using Marine Vessel Traffic, "Sea Distance Calculator," <http://www.marinevesseltraffic.com/2013/07/distance-calculator.html> (accessed June 21, 2021).
108. Air Force Technology, "B-2 Spirit Stealth Bomber," <http://www.airforce-technology.com/projects/b2/> (accessed June 21, 2021).
109. Media Note, "Sixth United States–Philippines Bilateral Strategic Dialogue Joint Statement," U.S. Department of State, March 18, 2016, <https://2009-2017.state.gov/r/pa/prs/ps/2016/03/254833.htm> (accessed June 21, 2021).
110. News release, "U.S., Philippines Cut the Ribbon on Enhanced Defense Cooperation Agreement Project," U.S. Embassy in the Philippines, January 30, 2019, <https://www.pacom.mil/Media/News/News-Article-View/Article/1744271/us-philippines-cut-the-ribbon-on-enhanced-defense-cooperation-agreement-project/> (accessed June 21, 2021).
111. Staff Sgt. Anthony Small, "US, Philippine AF Concludes [sic] Bilateral Air Contingency Exchange," U.S. Air Force, February 6, 2019, <https://www.af.mil/News/Article-Display/Article/1749908/us-philippine-af-concludes-bilateral-air-contingency-exchange/> (accessed June 21, 2021).
112. Michael J. Green and Gregory B. Poling, "The U.S. Alliance with the Philippines," *Center for Strategic and International Studies Commentary*, December 3, 2020, <https://www.csis.org/analysis/us-alliance-philippines> (accessed June 21, 2021).
113. Fact Sheet, "U.S. Security Cooperation with Singapore," U.S. Department of State, Bureau of Political-Military Affairs, April 20, 2021, <https://www.state.gov/u-s-security-cooperation-with-singapore/> (accessed June 21, 2021).
114. See, for example, Wyatt Olson, "Deal Likely to Bring More US Assets to Australia," *Stars and Stripes*, June 20, 2014, <https://www.stripes.com/news/deal-likely-to-bring-more-us-military-assets-to-australia-1.289846> (accessed June 21, 2021).
115. Smith, Ministerial Statement on "Full Knowledge and Concurrence."
116. Grady Fontana, "Military Sealift Command's USNS Piliilau Delivers Cobra Gold 18 Essentials," U.S. Department of Defense, Defense Visual Information Distribution Service, February 9, 2018, <https://www.dvidshub.net/news/265236/military-sealift-commands-usns-piliilau-delivers-cobra-gold-18-essentials> (accessed June 22, 2021). See also Rear Adm. (Ret.) Michael McDevitt, "America's Interest in Diego Garcia," *War on the Rocks*, June 3, 2020, <https://warontherocks.com/2020/06/americas-interest-in-diego-garcia/> (accessed June 22, 2021).
117. For an example of a very accessible database, see The World Bank, "Logistics Performance Index: Quality of Trade and Transport-Related Infrastructure (1=Low to 5=High)," <http://data.worldbank.org/indicator/LPLI.INFR.XQ> (accessed June 19, 2021).

Conclusion: Scoring the Global Operating Environment

The United States is a global power with global security interests, and threats to those interests can emerge from any region. Consequently, the U.S. military must be ready to operate in any region when called upon to do so and must account for the range of conditions that it might encounter when planning for potential military operations. This informs its decisions about the type and amount of equipment it purchases (especially to transport and sustain the force); the location or locations from which it might operate; and how easily it can or cannot project and sustain combat power when engaged with the enemy.

Aggregating the three regional scores provides a global operating environment score of **FAVORABLE** in the *2022 Index*.

Europe. Overall, the European region remains a stable, mature, and friendly operating environment. Russia remains the preeminent military threat to the region, both conventionally and unconventionally, but China has become a significant presence through its propaganda, influence operations, and investments

in key sectors. Both NATO and many non-NATO European countries have reason to be increasingly concerned about the behavior and ambitions of both Russia and China, although agreement on a collective response to these challenges remains elusive.

The past year saw continued U.S. military and political reengagement with the continent along with modest increases in European allies’ defense budgets and capability investment. The U.S. military position in Europe is the strongest it has been for several years; efforts in exercises and logistics have continued, and a large withdrawal from Germany was cancelled. The economic, political, and societal impacts of the COVID-19 pandemic are only beginning to be felt and will undoubtedly have to be reckoned with for years to come, especially with respect to Europe’s relationship with China. However, NATO has maintained its collective defense posture throughout the pandemic.

NATO’s renewed emphasis on collective defense has resulted in a focus on logistics. The biggest challenges to the alliance derive from

Global Operating Environment

	VERY POOR	UNFAVORABLE	MODERATE	FAVORABLE	EXCELLENT
Europe				✓	
Middle East			✓		
Asia				✓	
OVERALL				✓	

gaps in capability and readiness among many European nations, the importance of continuing improvements and exercises in the realm of logistics, a tempestuous Turkey, disparate threat perceptions within the alliance, and the need to establish the ability to mount a robust response to both linear and nonlinear forms of aggression.

For Europe, scores this year remained steady, as they did in 2020 (assessed in the *2021 Index*), with no substantial changes in any individual categories or average scores. The *2022 Index* again assesses the European operating environment as “favorable.”

The Middle East. The Middle East region is now highly unstable, in large measure because of the erosion of authoritarian regimes, and a breeding ground for terrorism. Overall, regional security has continued to deteriorate. Although Iraq has restored its territorial integrity since the defeat of ISIS, the political situation and future relations between Baghdad and the United States will remain difficult as long as a government that is sympathetic to Iran is in power. U.S. relations in the region will remain complex, but this has not stopped the U.S. military from operating as needed.

The supremacy of the nation-state is being challenged in many countries by non-state actors that wield influence and power comparable to those of small states. The region’s primary challenges—continued meddling by Iran and surging transnational terrorism—are made more difficult by Sunni–Shia sectarian divides, the more aggressive nature of Iran’s Islamist revolutionary nationalism, and the proliferation of Sunni Islamist revolutionary groups. COVID-19 exacerbated these economic, political, and regional crises during 2020 and continued to do so throughout 2021, and the result could be further destabilization of the post-pandemic operational environment for U.S. forces.

In the Middle East, the U.S. benefits from operationally proven procedures that leverage bases, infrastructure, and the logistical processes needed to maintain a large force forward deployed thousands of miles away from

the homeland. The personal links between allied armed forces are also present, and joint training exercises improve interoperability and provide an opportunity for the U.S. to influence some of the region’s future leaders.

America’s relationships in the region are based pragmatically on shared security and economic concerns. As long as these issues remain relevant to both sides, the U.S. is likely to have an open door to operate in the Middle East when its national interests require that it do so.

Although circumstances in all measured areas vary throughout the year, in general terms, the 2022 Index assesses the Middle East operating environment as “moderate,” but the region’s political stability continues to be “unfavorable” and will remain a dark cloud over everything else.

Asia. The Asian strategic environment includes half the globe and is characterized by a variety of political relationships among states with wildly varying capabilities. This makes Asia far different from Europe, which in turn makes America’s relations with the region different from its relations with Europe. American conceptions of Asia must recognize the physical limitations imposed by the tyranny of distance and the need to move forces as necessary to respond to challenges from China and North Korea.

The complicated nature of intra-Asian relations and the lack of an integrated, regional security architecture along the lines of NATO make defense of U.S. security interests more challenging than many Americans appreciate. However, the U.S. has strong relations with allies in the region, and their willingness to host bases helps to offset the vast distances that must be covered. The militaries of Japan and the Republic of Korea are larger and more capable than European militaries, and both countries are becoming more interested in developing missile defense capabilities that will be essential in combatting the regional threat posed by North Korea.

We continue to assess the Asia region as “favorable” to U.S. interests in terms of alliances,

Global Operating Environment: Summary



overall political stability, militarily relevant infrastructure, and the presence of U.S. military forces.

Summarizing the condition of each region enables us to get a sense of how they compare in terms of the difficulty that would be involved in projecting U.S. military power and

sustaining combat operations in each one. As a whole, the global operating environment currently maintains a score of “favorable,” which means that the United States should be able to project military power anywhere in the world to defend its interests without substantial opposition or high levels of risk.