Global Operating Environment

Assessing the Global Operating Environment

Aside from assessing a military force's equipment and the readiness of its people, measuring its strength—defined as the extent to which that force can accomplish missions—also requires examination of the environments in which the force operates. Aspects of one environment may facilitate military operations and present the U.S. military with obvious advantages; aspects of another may work against them and limit the effect of U.S. military power. The capabilities and assets of U.S. allies, the strength of foes, the willingness of friend or foe to use its military power, the region's geopolitical environment, and the availability of forward facilities and logistics infrastructure all factor into whether an operating environment is helpful when U.S. military forces must be called into action.

In any assessment of an operating environment, U.S. treaty obligations with countries in the region should always be a prime consideration. 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. A treaty partnership usually yields regular training exercises and interoperability as well as political and economic ties. It also obligates the U.S. to commit its military in support of an ally, which has the effect of focusing U.S. military leadership on some regions more than others.

Other factors that affect an operating environment include 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 communication, weaponry, and other systems; and whether the U.S. maintains key bilateral alliances with nations in the region. 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 could provide needed support for future U.S. military operations. Additional criteria that should be considered include the quality of the local infrastructure, the area's political stability, whether or not a country is embroiled in any conflicts, and the degree to which a nation is economically free.

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.

Then there are low-likelihood, high-consequence events that, although they occur infrequently, can radically alter conditions in ways that affect U.S. interests. Massive natural disasters like Typhoon Tip in 1979 or the explosion of Mount Tambora in 1816 can displace populations, upend regional power arrangements, or destroy critical infrastructure. The eruption of Mount Pinatubo in 1991, for example, caused 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. A massive solar flare could have a similar impact on a much larger scale because of the level of our dependence on electrical power. Scientists, analysts, planners, and officials in public and commercial ventures study such things but seldom take concrete action to mitigate their potential impact.

The COVID-19 pandemic that stretched from late 2019 to early 2023 is the most recent example of such a world-shaking event. It 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. Regardless of one's view with regard to its origin, its severity compared to other diseases, or how it was handled, the economic and societal stresses stemming from the pandemic put terrific pressures on

political establishments. They also 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.

As of mid-2023, nearly all countries appear to have resolved many of the disruptions caused by the pandemic, adapting their economies and adjusting their policy approaches to deal with the public health crisis. So, too, did populations normalize their routines, mitigating many of the original fears stemming from the crisis. In similar fashion, military forces found ways to return to the training and exercises that are necessary to regain proficiency.

Russia's invasion of Ukraine in February 2022 and the war that has continued since then have affected national and public perspectives with regard to military power. Before Russia invaded its neighbor, many capitals acknowledged the importance of military power but often failed to follow their words with commensurate investments in operationally relevant military forces. Confronted with the reality of a war in Europe and the possibility of another one in Asia because of China's persistent saber rattling and heavy investment in its ability to project power, Poland, Germany, Great Britain, and Japan (to name but a few) have substantially increased their defense budgets and, among European allies, have contributed equipment, munitions, and a range of supplies to Ukraine to help it defend itself.

One consequence of this has been reinvigorated discussions among U.S. allies about the status of military power and the need to ensure that forces can work together effectively. But another has been the consumption of expensive military capabilities, which has led some countries to start hedging on their pledges to sustain support to Ukraine or, in some circumstances, to contribute national power to collective defense.

All of this to say that conditions evolve from one year to the next and from one security setting to the next in ways that affect the ease or difficulty of conducting U.S. military operations. Our assessment of the operating environment is meant to add critical context to complement the threat environment and U.S. military assessments that are detailed each year in the *Index of U.S. Military Strength*.

A final note: The names of all disputed territories mentioned in this *Index* are the names used by the U.S. Department of State. The reader should not construe this as reflecting a position on any of these disputes.

Europe

Daniel Kochis

The scale, scope, and intensity of Russia's war on Ukraine have exposed the inadequacy of allied capabilities, munitions stocks, and force posture in Europe, especially in Eastern Europe, while underscoring the need for updated regional defense plans. The U.S. has reintroduced additional manpower and capabilities into Europe since February 2022 and has built a significant footprint in places like Poland and Romania. European North Atlantic Treaty Organization (NATO) allies have deployed in support of alliance deterrence efforts in eastern Europe, and many have renewed their commitment to NATO spending benchmarks and rebuilding military capabilities that have atrophied over the past 30 years. Some members—Lithuania, Poland, Estonia, and Greece, in particular—have made dramatic increases in defense spending while others—Germany, France, Spain, Norway, and Belgium, as examples—have not, in spite of pledges to do better. Still, NATO, as a whole, has demonstrated an upward trend in investing in defense, outpacing the United States in aggregate terms by nearly three-to-one over the past decade in constant 2014 dollars. To be clear, some of the largest improvements as a percentage of GDP or percentage change from one year to the next have been among smaller countries who, because of their size and the amount of money they are able to spend, cannot translate a specific increase into quantity-of-capability when it comes to armored forces, squadrons of tactical aircraft, or naval battle groups. Europe's security condition, and with it the security of U.S. interests, would be materially improved if the larger countries spent more on collective defense capabilities. Still, European NATO partners have been improving their investments, albeit at a slower pace than is needed given the depths to which defense capabilities and readiness have fallen since the end of the Cold War.[1] Interestingly, it appears that the farther away a NATO country is from Russia, the less it tends to spend on defense, implying proximity to perceived danger strongly influences such spending. The Baltic countries, Poland, and NATO members in Eastern Europe spend more on defense than those in Western and Southern Europe.[2]

In June 2022, NATO adopted its first new Strategic Concept in 12 years. The new concept document takes into account the comprehensive changes in the transatlantic security environment that have taken place in the past 12 years and clearly recognizes the growing threat posed by the Russia–China axis:

> The Russian Federation is the most significant and direct threat to Allies' security and to peace and stability in the Euro-Atlantic area. It seeks to establish spheres of influence and direct control through coercion, subversion, aggression and annexation. It uses conventional, cyber and hybrid means against us and our partners. Its coercive military posture, rhetoric and proven willingness to use force to pursue its political goals undermine the rules-based international order.[3]

> The People's Republic of China's (PRC) stated ambitions and coercive policies challenge our interests, security and values.... The PRC's malicious hybrid and cyber operations and its confrontational rhetoric and disinformation target Allies and harm Alliance security. The PRC seeks to control key technological and industrial sectors, critical infrastructure, and strategic materials and supply chains. It uses

> its economic leverage to create strategic dependencies and enhance its influence. It strives to subvert the rules-based international order, including in the space, cyber and maritime domains. The deepening strategic partnership between the People's Republic of China and the Russian Federation and their mutually reinforcing attempts to undercut the rules-based international order run counter to our values and interests.[4]

NATO welcomed Finland as its 31st member state in April 2023[5] and is expected to welcome Sweden eventually as well.[6] The alliance is updating regional defense plans, is transitioning to a new force structure, and has taken some steps to bolster deterrence through a stronger, more persistent presence in eastern member states. The ability of the alliance to implement recent decisions, flesh out plans for expanded multinational deployments, and fulfill larger requirements for ready forces remains to be seen.

The U.S. and its allies also have made significant investments in arming and training the Ukrainian military. What began as individual nations supplying arms, ammunition, and supplies (often surplus) has evolved into a sustained flow of intelligence, weapons, matériel, and platforms upon which Ukrainian forces have become entirely reliant. Many supporting countries are repairing damaged Ukrainian equipment; some are aiding Ukraine with niche capabilities. While the U.S. remains the largest donor to Ukraine, many European nations are donating significant capabilities, particularly ammunition, armored vehicles, communications equipment, and medical supplies. European nations also have accepted millions of Ukrainian refugees fleeing the war.[7]

All of this reflects a grim reality: War is still a feature of international relations that cannot be predicted or always deterred. War is costly, both in preparation and in undertaking, and also generates additional costs (such as support for refugees and disruption of economic activity) beyond the straightforward expense of equipment and training.

The 51 countries in the U.S. European Command (USEUCOM) area of responsibility (AOR) include approximately one-fifth of the world's population, 10.7 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 to defend these shared ideals—the foundations on which America was built.

America's economic ties to the region are likewise important. 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.

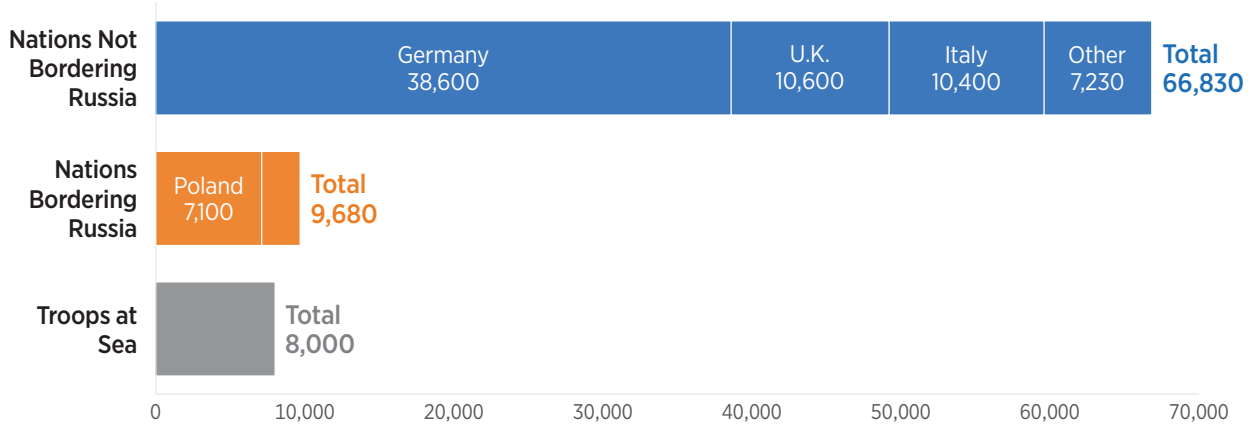
Europe is also important to the U.S. because of its geographical proximity to some of the world's most dangerous and contested regions. From the eastern Atlantic Ocean to the Middle East, up to the Caucasus through Russia, and into the Arctic, Europe is enveloped by an arc of instability. The European 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 America's economic and security interests in and near the region. Russia's brutal effort to remake the borders of Europe by force has shocked many partners, upended the continent's strategic picture, and caused a war with implications that are far wider than the sovereignty of Ukraine itself. Admiral Robert Burke, former 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."[8]

Other external threats to European security include Russia's activity in the Arctic, growing presence in the Mediterranean theater, and efforts to destabilize Western cohesion in addition to the possibility that Russia might expand the scope of its aggression to include the eastern states of NATO. Added to this is the growing threat to the transatlantic alliance from Chinese investments, technology, and propaganda efforts. Russian naval activity in the North Atlantic and Arctic has led to a renewed focus on regional command and control and increased operations by U.S. and allied air and

CHART 8

Few U.S. Troops in Europe Are Stationed Near Russia



NOTE: Data for countries with fewer than 100 troops are excluded.
SOURCE: U.S. European Command, written response to Heritage Foundation request for information on U.S. troop levels in Europe, July 21, 2023.

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naval assets in the Arctic, and one consequence of Russia's strengthened position in Syria has been a resurgence of Russian activity and "congested" conditions in the Mediterranean.[9]

Speaking at an Atlantic Council meeting in March 2019, former 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."[10] Nowhere is the value of allies and U.S. basing more apparent than it is in the European operating environment.

U.S. Reinforcements in Europe. Russia's war against Ukraine greatly accelerated a trend of U.S. reinvestment in Europe that had begun following Russia's initial invasion of Ukraine in 2014. 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 Operation Atlantic Resolve and funded through the European Deterrence Initiative (EDI), the U.S. increased its forward presence in Europe; invested in European basing infrastructure and prepositioned stocks, equipment, and supplies; engaged in enhanced multinational training exercises; and negotiated agreements for increased cooperation with NATO allies.

The U.S. currently has about 100,000 troops stationed in Europe.[11] In response to Russia's invasion of Ukraine, the U.S. increased the flow of forces to Europe, and the U.S. and NATO undertook a reevaluation of long-term basing structures and force posture requirements with a view to preventing Russian aggression from spilling over into alliance member states, especially those like Poland, whose role as a staging ground for aid to Ukrainian forces has made it a Russian target.

In March 2023, the U.S. presence in Poznan, Poland, transitioned to Army Garrison Poland (USAG–P), the eighth permanent U.S. Army garrison in Europe.[12] Overall, the U.S. has a presence of around 12,000 in Poland.[13] The Army's V Corps, which had been deactivated in 2013, was reactivated on November 9, 2020, and became fully operational in November 2021.[14] In March 2022, the headquarters, then based in Kentucky, was largely deployed to Europe "to provide additional command and control of U.S. Army forces in Europe" and "to build readiness, improve interoperability, reinforce allies and deter further Russian aggression."[15] In June 2022, President Biden announced that the U.S. would establish the permanent V Corps headquarters in Poland.[16] According to General Christopher Cavoli, Supreme Allied Commander Europe (SACEUR) and Commander, U.S. European Command, "permanently

assigned forces are more operationally effective, as they remain fully oriented to the operational environment and can become interoperable with our Allies and Partners."[17]

During the June 2022 NATO Summit in Madrid, the U.S. announced additional deployments to Europe including the deployment of a new rotational brigade combat team to Romania. Today, around 4,000 U.S. troops, largely based at the Mihail Kogalniceanu Air Base, help to train "soldiers from NATO allies in Bulgaria, Germany, Hungary and Slovakia."[18] The deployment has been extended through at least the end of 2023 with a new rotation of troops from Kentucky to be joined by a two-star general and staff from Fort Drum, New York. Analysts have noted that having a major general in Romania "that close to the combat zone...would allow for quick decisions about where to position troops and weapons should Russia push the war into NATO territory."[19] Additional contributions to European security announced in June 2022 include (among others listed) enhanced rotational deployments of "armored, aviation, air defense, and special operations forces" to the Baltics; an "air defense artillery brigade headquarters, a short-range air defense battalion, a combat sustainment support battalion headquarters, and an engineer brigade headquarters" forward stationed in Germany; a "a short-range air defense battery" forward stationed in Italy.[20]

The U.S. has further strengthened its presence in Norway. The Supplementary Defense Cooperation Agreement signed by the two nations in April 2021 and approved by the Norwegian parliament in June 2022 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.[21] Construction at Evenes will support the monitoring of Russian submarine activity by Norwegian and allied maritime patrol aircraft. According to former 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."[22]

In October 2021, the U.S. Navy deployed a mobile "Expeditionary Medical Facility to a cave system near Bogen Bay in northern Norway, some 100 miles north of the Arctic Circle."[23] According to the operations director for the U.S. Navy Expeditionary Medical Support Command (NEMSCOM), "Expeditionary Medical Facilities are deployable on short notice and contain many capabilities of a modern hospital."[24] In October 2020, at the behest of the United States, Norway announced the reopening of Olavsvern bunker, a mountainside submarine base near Tromsø with "32,000 square feet of deep-water docking space, including a full dry dock for maintenance," capable of berthing and refitting American submarines. The base, which had been closed in 2002, is now open to U.S. *Seawolf*–class nuclear submarines.[25]

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 like those that occurred in 2021 and 2022 when U.S. Marines worked with Norwegian forces and utilized Norway's ample training ranges.[26] 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 that country.[27] 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.[28]

From March–April 2022, Norway hosted NATO's Cold Response 2022, at that time the largest Norwegian-led exercise since the Cold War. Among the participants were 3,000 American Marines.[29] In February and March 2023, U.S. forces took part in Arctic Forge 23, "an exercise that includes Finland's Defense Exercise North, and exercise Joint Viking in Norway."[30] The U.S. contributed approximately 930 Marines and Army personnel to Joint Viking and 280 Army personnel to Defense Exercise North, and II Marine Expeditionary Force Commanding General David A. Ottignon assessed that the exercises made U.S. forces "more survivable and lethal in austere environments."[31] Finland, Sweden, and Norway reportedly are planning a joint exercise, Nordic Response 2024, that as currently planned would be the largest NATO exercise in the Arctic since the end of the Cold War.[32]

In February 2023, the 2nd Armored Brigade Combat Team (ABCT) of the 1st Cavalry Division from Fort Hood, Texas, replaced the outgoing BCT in the tenth armored rotation in support of OAR.[33] Many analysts have noted the special deterrent importance of ground forces. "Land forces provide traditional 'boots on the ground' and a visible presence

among local populations," according to one recent analysis. "They can also enhance the credibility of deterrence through bringing to bear the heavy ground forces required to defend, seize, and hold territory in the event of conflict."[34]

In addition to back-to-back rotations of armor, the U.S. has maintained a rotational aviation brigade in Europe since February 2017.[35] The ninth such rotation, lasting from August 2022–April 2023, is the 1st Armored Division, Combat Aviation Brigade, from Fort Bliss, Texas, with 2,300 troops, 10 CH-47 Chinooks, 25 AH-64 Apaches, and 40 UH-60 and 15 HH-60 Black Hawk helicopters.[36] The tenth rotation will be carried out by the 3rd Combat Aviation Brigade, 3rd Infantry Division, from Fort Stewart, Georgia, from May 2023–February 2024.[37]

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 "include ammunition, fuel, movement control, transportation, maintenance, ordnance, supply, and postal services."[38]

In May 2018, the U.S. began to fly MQ-9 Reaper drones on unarmed reconnaissance flights out of Miroslawiec Air Base in Poland, which U.S. Air Force (USAF) officials stated was chosen because of its "strategic location."[39] In January 2021, the U.S. announced that 90 USAF personnel and an unspecified number of MQ-9s would be based at Campia Turzii in Romania "to conduct intelligence, surveillance and reconnaissance missions in support of NATO operations."[40] According to General Jeffrey Harrigian, then Commander, U.S. Air Forces in Europe, U.S. Air Forces Africa, and Allied Air Command, the base's location approximately 300 miles from the coast "really facilitates our ability to compete in the Black Sea."[41] In late 2022, the U.S. began to deploy MQ-9s from Larissa Air Base in Greece near the Aegean Sea,[42] "a strategic location, allowing the MQ-9s to easily support both the eastern and southern flanks of NATO."[43] The U.S. also operates MQ-9s out of Lask Air Base in Poland.[44]

In April 2022, it was reported that the USAF had "moved additional fighters, tankers, and intelligence, surveillance, and reconnaissance aircraft into the European theater over the past few months, as well as bombers on a rotational basis, all to reassure NATO allies who feel threatened by the invasion of Ukraine."[45]

In January 2022, as part of the ongoing U.S. commitment to NATO's Baltic Air Policing, six F-15Es based in North Carolina deployed to Ämari Air Base in Estonia.[46] That same month, U.S. F-16s based in Germany deployed to Poland to fly regional air policing missions. The day after Russia's full-scale invasion of Ukraine in February 2022, six Utah-based F-35As forward deployed to Spangdahlem Air Base in Germany, periodically taking part in Baltic Air Policing missions out of Estonia and Lithuania.[47] In May 2022, eight F-35As from the Vermont National Guard deployed to Spangdahlem to take part in NATO's enhanced Air Policing (eAP) mission.[48] From August–November 2022, F22s based in Alaska and F-15E Strike Eagles based in RAF Lakenheath in the United Kingdom (U.K.), took part in air policing flying out of Poland.[49]

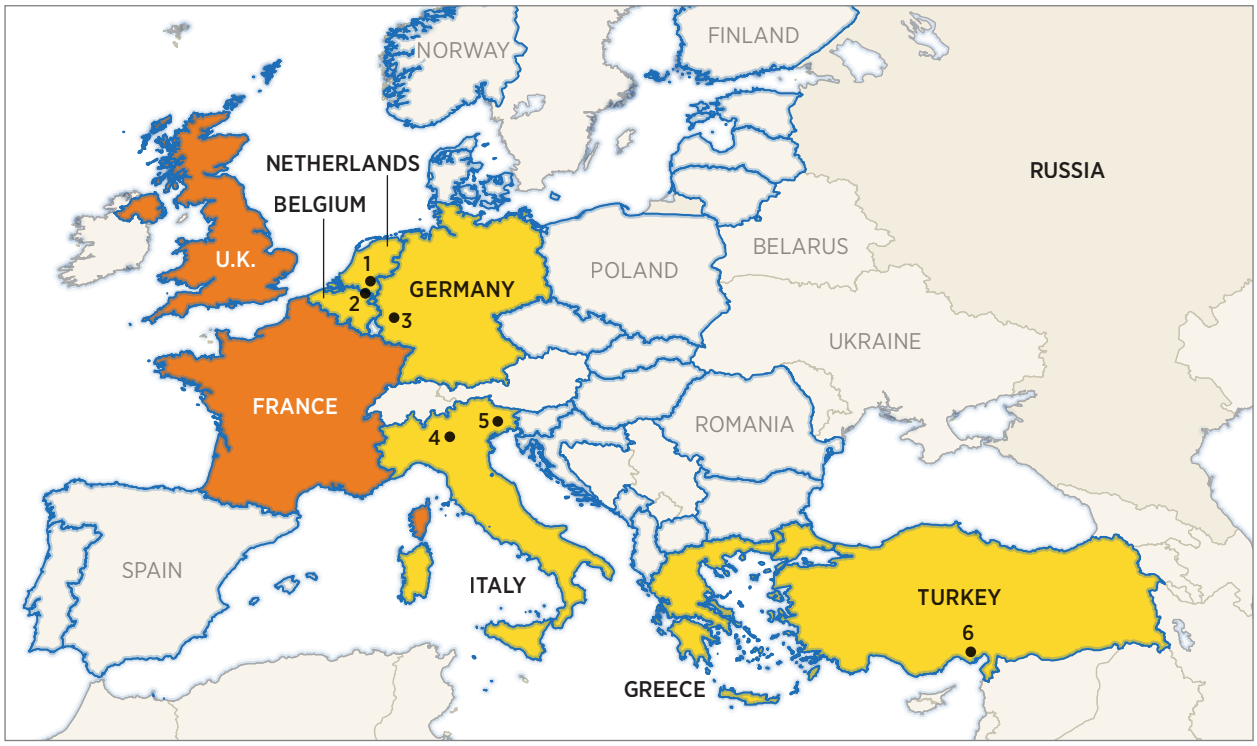
U.S. B-52H Stratofortresses based in North Dakota have periodically deployed to the European theater. In August 2022, B-52s deployed to RAF Fairford, U.K., for exercises in which "U.S., Norway and Sweden military aircraft...executed rapid, global power projection missions to support the mutual defense of NATO partners and Allies, all while achieving multi-domain effects."[50] In February 2023, two B52s conducted a low approach flyby of Estonia's Independence Day celebrations in Tallinn having flown from North Dakota.[51]

European Deterrence Initiative. Some U.S. investments in Europe including rotations of Armored and Aviation Brigade Combat Teams are funded through the European Deterrence Initiative (EDI). The Biden Administration has requested $3,630.4 million for the EDI in fiscal year (FY) 2024, which is $637 million (15 percent) less than the enacted FY 2023 EDI budget of $4,267.4 million.[52] EDI funding requests for FY 2024 include support for such activities as "rotational force deployments, infrastructure investments, and [delivery of] the right capabilities in key locations throughout Europe";[53] intelligence enhancements for special operations forces;[54] exercises to "increase[] the overall readiness and interoperability of U.S. forces across all domain[s]" and "with our NATO Allies and theater partners";[55] "facilities to store prepositioned equipment, munitions and fuel";[56] and modernization of "CBRN [Chemical, Biological, Radiological, and Nuclear] defenses to ensure forces are prepared to [defend] against rising threats in the AOR."[57]

MAP 1

Overview of NATO's Nuclear Deterrence

NATO members | NATO members in Europe with nuclear weapons | Countries with nuclear-sharing agreement to carry U.S. nuclear weapons on aircraft



U.S. tactical nuclear weapons storage sites in Europe

1 Volkel Air Base, Netherlands
2 Kleine Brogel, Belgium
3 Büchel Air Base, Germany
4 Ghedi Air Base, Italy
5 Aviano Air Base, Italy
6 Incirlik Air Base, Turkey

NOTES: There is conflicting information regarding whether the nuclear-sharing agreement with Turkey remains in force. In 2022, Poland raised the possibility of taking part in nuclear sharing in the future.
SOURCES: Center for Arms Control and Non-Proliferation, "Fact Sheet: U.S. Nuclear Weapons in Europe," August 18, 2021, https://armscontrolcenter.org/fact-sheet-u-s-nuclear-weapons-in-europe/ (accessed September 9, 2023), and Hans Kristensen, "NATO Steadfast Noon Exercise and Nuclear Modernization in Europe," Federation of American Scientists, October 17, 2022, https://fas.org/publication/steadfast-noon-exercise-and-nuclear-modernization/ (accessed September 9, 2023).

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The EDI has supported infrastructure improvements across the region. One major EDI-funded project is a replacement hospital at Landstuhl, Germany, that will "provid[e] primary care, specialized consultative care, hospitalization and treatment for more than 200,000 U.S. military personnel, DoD and interagency civilians and dependents in Europe."[58] 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.[59]

In addition to the EDI, as of the end of 2021, the U.S. Department of State had awarded nearly $300 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: infantry fighting vehicles for Croatia, Greece, and North Macedonia; helicopters for Albania, Bosnia and Herzegovina, Lithuania, and Slovakia; and air surveillance radars and fixed-wing aircraft for Bulgaria. The program helps allies to "modernize their militaries by building NATO interoperable forces and removing Russian and Soviet-legacy equipment from their force structure."[60]

Prepositioned Stocks. The U.S. continues to preposition equipment in Europe across all services. In February 2022, the U.S. activated six Army Prepositioned Stock-2 sites to outfit an Armored Brigade Combat Team deploying from the U.S.[61] The FY 2024 EDI budget request includes $1,246.2 million to support enhanced prepositioning for the U.S. Army, Air Force, and Special Forces.[62] The U.S. Army lists storage sites in Dülmen, Germany; Eygelshoven, the Netherlands; Zutendaal, Belgium; Livorno, Italy; Mannheim, Germany; and Powidz, Poland.[63] The Powidz site opened on April 5, 2023.[64]

In March 2022, NATO opened its first Multinational Ammunition Warehousing Initiative (MAWI) in Estonia for allies to store munitions for Enhanced Forward Presence (EFP) deployments. The alliance plans further MAWI sites to support EFP deployments and the Very High Readiness Joint Task Force (VJTF).[65] "With Russia's brutal war against Ukraine," NATO's Assistant Secretary General for Defence Investment has stated, "MAWI has gained significant relevance beyond efficiency improvements only. The expansion of NATO's multinational battlegroups on the eastern flank requires an upgrade of the logistical support infrastructure to match this scope."[66]

Aid to Ukraine. According to the U.S. Department of State:

> Since January 2021, the United States has invested more than $42 billion in security assistance to demonstrate our enduring and steadfast commitment to Ukraine's sovereignty and territorial integrity. This includes more than $41.3 billion since Russia's [sic] launched its premeditated, unprovoked, and brutal war against Ukraine on February 24, 2022. Since 2014, the United States has provided more than $44.1 billion in security assistance for training and equipment to help Ukraine preserve its territorial integrity, secure its borders, and improve interoperability with NATO.[67]

The U.S. is by far the largest donor to Ukraine. According to the Kiel Institute for the World Economy's Ukraine Support Tracker, the top six donors of total financial, humanitarian, and military assistance from January 24, 2022, to January 15, 2023, were the United States, "EU Institutions," the United Kingdom, Germany, Canada, and Poland.[68] European Union aid is heavily weighted toward financial support in the form of loans.[69] When aid is calculated as a percentage of gross domestic product (GDP), however, "[t]he United States comes in 5th, with total commitments worth around 0.37 percent of its 2021 GDP," behind Estonia, Latvia, Lithuania, and Poland.[70]

In January 2023, Germany announced that it would be donating at least 14 Leopard 2A6 tanks to Ukraine.[71] The first eight arrived in March. Germany also sent "two specialist tank-recovery vehicles and 40 Marder infantry fighting vehicles."[72] In February, Poland became the first nation to deliver tanks (the first four of a total of 14 Leopard 2A4s eventually delivered).[73] In March, the U.S. announced that it would send an older Abrams tank version, the M-1A1, rather than the M-1A2 originally planned in order to advance delivery to early fall 2023. The U.S. is planning to outfit a complete tank battalion with 31 of the M-1A1s, which U.S. Secretary of Defense Lloyd Austin has said would "make a pretty significant difference" for Ukrainian operations.[74]

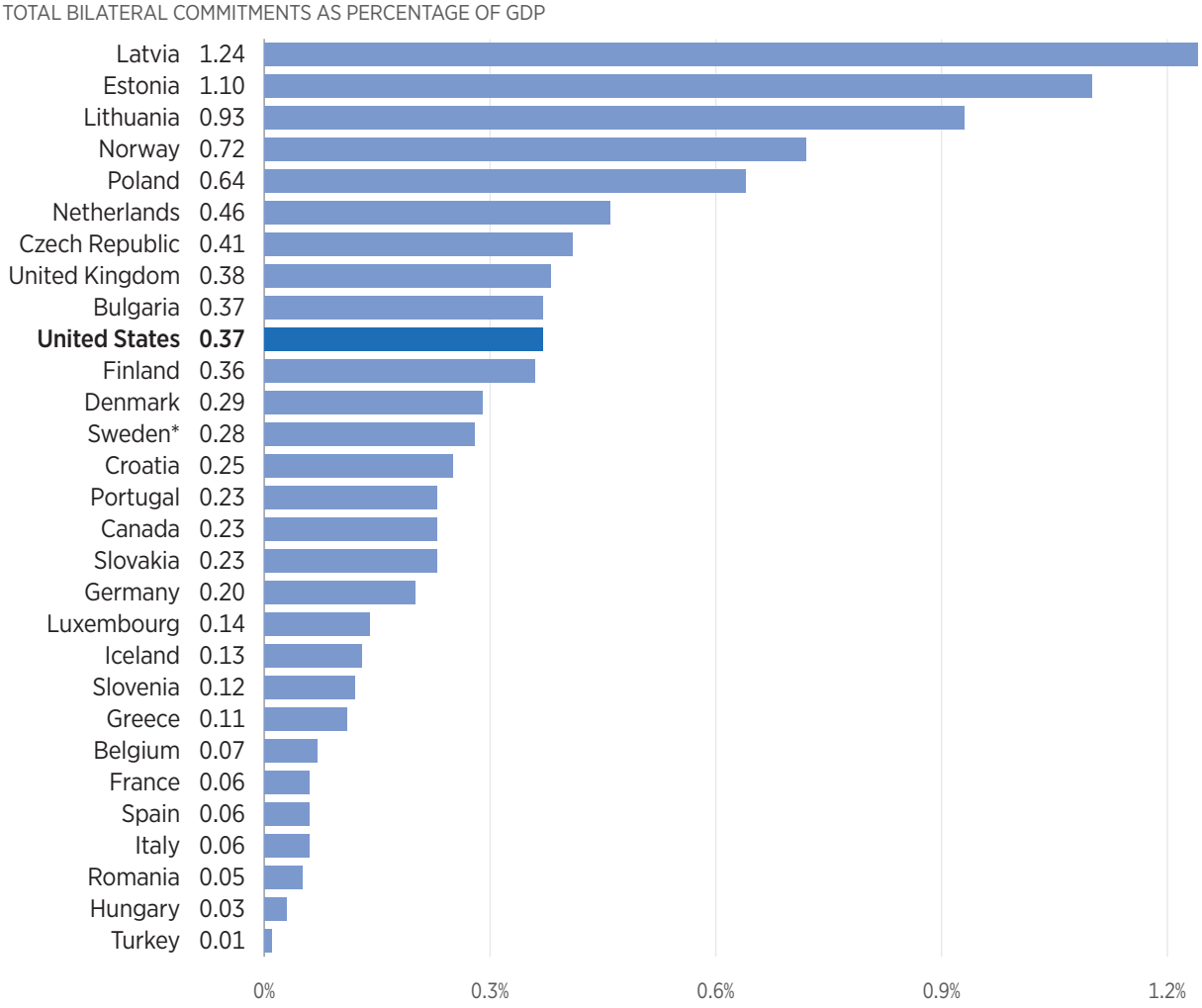
In March 2023, Norway announced that it had delivered eight Leopard 2A4 tanks to Ukraine.[75] Also in March, the United Kingdom delivered "14 UK Challenger tanks" along with "20 Bulldog armoured troop carriers and 30 AS-90 self-propelled artillery guns."[76] Canada sent four Leopard 2 tanks at the end of February, Spain sent six Leopard 2A4 tanks at the end of April,[77] Finland announced at the end of March that it would soon be sending three Leopard 2 armored mine-clearing vehicles, and Sweden promised in February to "donate up to 10 Leopard 2 tanks."[78]

In addition to the Abrams, U.S. aid includes such support as ammunition, anti-tank weapons, 20 Mi-17 helicopters, 154 Bradley Infantry Fighting Vehicles, Switchblade Unmanned Aerial Systems,

CHART 9

NATO Aid to Ukraine

Shown below are figures for total military, financial, and humanitarian aid to Ukraine since January 24, 2022, by current and pending members of NATO.



* NATO membership pending.
NOTE: Data for Albania, Montenegro, and North Macedonia are not available.
SOURCE: Data from Kiel Institute for the World Economy, "Ukraine Support Tracker," https://www.ifw-kiel.de/topics/war-against-ukraine/ukraine-support-tracker/ (accessed September 9, 2023).

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and air defenses including one Patriot battery and eight National Advanced Surface-to-Air Missile Systems (NASAMS) and munitions.[79] Air defenses are a priority for Ukraine. Germany and the Netherlands have stated their intention to donate Patriot missile batteries, and France and Italy have donated SAMP/T Medium Range Air Defense Systems.[80] Germany has sent two advanced air defense batteries to Ukraine that had been stationed to protect Berlin from incoming missiles.[81]

Leaked U.S. Pentagon documents reportedly reveal concerns that Ukrainian air defense ammunition might be used at a high rate of expenditure as well as concerns about the need for a greater

quantity of air defense systems. "While the Patriots and SAMP-T are more sophisticated than S-300," according to the documents, "the three batteries due to arrive in Ukraine won't be able to replace the breadth of coverage afforded by the 25 currently operating Ukrainian S-300 batteries."[82] The West's ability to provide munitions without a major increase in production has further revealed the limitations of the Western defense industrial base. According to the Royal United Services Institute, for example, "At the height of the fighting in eastern Ukraine's Donbas area, Russia was using more ammunition in two days than the entire stock of the British military."[83]

Fighter jets also have begun to arrive in Ukraine. By April 17, Slovakia had delivered all 13 promised MiG-29s.[84] The first Slovakian-donated MiGs saw combat by the end of March.[85] Slovakia made known that Russian technicians helping to maintain the MiGs until the end of 2022 had sabotaged the jets. Slovakian Defense Minister Jaroslav Nad stated that before being fixed, the jets "were able to fly, but that doesn't mean they were also capable of combat."[86] In April, Poland sent the first five MiG29s to Ukraine, having received export approval from Germany pursuant to the terms of a 2003 purchase agreement.[87]

Many European nations have depleted their own stocks to equip Ukrainian forces. For instance, in addition to Harpoon anti-ship missiles, Denmark is donating all of its 19 Caesar self-propelled howitzers, some of which have been ordered by the Danes but have yet to arrive.[88] In 2022, Estonia and Latvia donated one-third of their defense budgets to Ukraine.[89] The expenditure rate of munitions on the battlefield, combined with Western industry's lack of preparedness for a prolonged war, has Western officials concerned about their ability to maintain the flow of essential capabilities to Ukraine. In November 2022, one NATO official commented, "I think everyone is now sufficiently worried."[90]

NATO allies continue to train Ukrainian forces, sometimes on specific systems. The U.S. trained 7,000 Ukrainian soldiers between February 2022 and March 2023.[91] Some have traveled to the U.S. for training on systems such as Patriot; others have taken part in combined arms, medical training, and combat casualty care at U.S. bases in Germany. With support from Australia, Canada, Denmark, Finland, Lithuania, the Netherlands, New Zealand, Norway, and Sweden, the U.K.'s Operation Interflex trained 10,000 Ukrainian troops from June–December 2022 and plans to train 20,000 in 2023.[92] In early 2023, the U.K. trained Ukrainian tank crews on the Challenger II tank at British bases.[93] Germany is heading an EU mission to train 9,000 Ukrainian troops in Germany in 2023 with a goal of eventually training 30,000; the Netherlands and Norway are contributing to this training mission.[94] The Czech Republic, France, Italy, Romania, Slovakia, and Spain are also training Ukrainian troops.[95]

NATO allies are helping Ukraine to repair and maintain equipment. U.S. forces are helping Ukrainians to troubleshoot equipment issues over the phone or via video link, at times while the capability in question is engaged in battle.[96] Poland maintains a large facility with 400 personnel to repair Ukrainian armor and artillery.[97] In April 2023, Poland opened another facility, Bumar-Labędy, to repair and maintain donated T-72 and PT-91 main battle tanks (MBTs) and possibly Leopard IIs.[98] U.S. Abrams tanks will reportedly be repaired in Poznan, Poland, where U.S. personnel are said to be assisting.[99] In April 2023, Germany's Rheinmetall opened a maintenance facility near Satu Mare, Romania, with the ability to service Leopard IIs, "self-propelled howitzers, Marder infantry fighting vehicles, Fuchs armored transport vehicles, and military trucks."[100] Bulgarian factories have repaired Ukrainian equipment including helicopters.[101] In February 2023, Ukrainian "weapons and military hardware manufacturer Ukroboronprom...signed a memorandum with the Czech Republic's VOP CZ military enterprise on repairing Ukrainian armored vehicles." The memorandum is part of a 2022 deal "to create joint enterprises to increase military equipment production for Ukraine."[102]

Other nations have assisted Ukraine with niche capabilities. Estonia, for example, led an EU-funded program to help strengthen Ukraine's cyber capabilities and in 2022 helped Ukraine's military to set up a cyber facility.[103] Also in 2022, the European Union began to reimburse member states for a portion of weapons sent to Ukraine through its European Peace Facility (EPF). In March 2023, the European Council agreed to spend $1.1 billion from the EPF to reimburse ammunition donations from the existing stocks of member states. An additional €1 billion will be drawn to fund "joint procurements through the European Defense Agency and will

place new orders at the European defense industry to speed up production to replenish stockpiles."[104]

The transatlantic community has also accepted large numbers of Ukrainian refugees fleeing the war. Since February 24, 2022, 10.7 million Ukrainian refugees have crossed the border into Poland, and more than 1.5 million have elected to remain rather than return to Ukraine or move elsewhere within Europe.[105] Other nations have accepted numbers that are far smaller but still significant in proportion to their populations.

U.S. Nuclear Weapons in Europe. In his 2023 EUCOM posture statement, General Christopher Cavoli reaffirmed that:

> As long as nuclear weapons exist, NATO will remain a nuclear Alliance. The nuclear capability of NATO-member Nuclear Weapons States deters aggression, prevents coercion, preserves peace, and instills confidence in the Trans-Atlantic bond. The U.S. continues to make available its strategic nuclear forces to defend NATO, serving as the Alliance's supreme guarantor of security. With key Allies, we maintain the capability to deploy strategic nuclear forces that support Alliance security.[106]

It is believed that until the end of the Cold War, the U.S. maintained approximately 2,500 nuclear warheads in Europe. Today, the U.S. maintains around 100 tactical nuclear warheads that are spread out across bases in Belgium, Italy, Germany, the Netherlands, and Turkey.[107]

In October 2019, reports surfaced that in light of ongoing tensions, the U.S. was considering moving the approximately 50 tactical nuclear weapons stored at Incirlik Air Base in Turkey, but this has not happened. All of these weapons are free-fall, variable yield[108] 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."[109] The U.S. has agreements with Belgium, Italy, Germany, and the Netherlands that allow for delivery of U.S. tactical nuclear weapons by allied aircraft, but "[t]he weapons at Incirlik…are solely for use on U.S. aircraft."[110] In October 2022, Polish President Andrzej Duda stated that Poland has raised the possibility of taking part in the nuclear sharing program.[111]

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 B61's safety, security, and effectiveness."[112] According to experts, "[t]he upgrades are all in the non-nuclear aspects of the unguided bomb's design, and involve removing a parachute and installing a new tail kit and other improvements for 'significantly greater accuracy.'"[113] The first production unit was completed in February 2022, and the extension program is to be completed by 2026.[114] The U.S. accelerated the fielding of the first upgraded units to Europe to December 2022 rather than Spring 2023 in a decision that was probably meant to reassure allies.[115]

China. As noted, NATO's 2022 Strategic Concept outlines the threat posed by the People's Republic of China:

> The People's Republic of China's (PRC) stated ambitions and coercive policies challenge our interests, security and values. The PRC employs a broad range of political, economic and military tools to increase its global footprint and project power, while remaining opaque about its strategy, intentions and military build-up. The PRC's malicious hybrid and cyber operations and its confrontational rhetoric and disinformation target Allies and harm Alliance security. The PRC seeks to control key technological and industrial sectors, critical infrastructure, and strategic materials and supply chains. It uses its economic leverage to create strategic dependencies and enhance its influence. It strives to subvert the rules-based international order, including in the space, cyber and maritime domains. The deepening strategic partnership between the People's Republic of China and the Russian Federation and their mutually reinforcing attempts to undercut the rules-based international order run counter to our values and interests.[116]

The growing nexus between Russia and China has been noted by Heritage Foundation analysts as well:

> Just weeks prior to Russia's second invasion of Ukraine, Putin and [Chinese Communist Party

> General Secretary] Xi [Jinping] announced a strategic partnership which promised "no 'forbidden' areas of cooperation." While Chinese support hasn't quite lived up to the hype, Beijing certainly hasn't been sitting on the sidelines. Recent analysis shows that China is shipping critical components including "navigation equipment, jamming technology and jet-fighter parts to sanctioned Russian government-owned defense companies." While China isn't the only nation helping Russia skirt western sanctions, it is the key enabler.[117]

China has significantly increased its presence in the European theater. In 2021, Admiral Burke warned that Chinese warships and investments are "increasingly present" in the Mediterranean and highlighted 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.[118]

Chinese investments in key European infrastructure present two serious risks. First, "port investments could be an indirect source of political leverage—the more a country's economy benefits from the presence of Chinese port operators, the more it depends on good relations with China."[119] Second, "China's investment in European strategic infrastructure has the potential to interfere with allied military mobility—the ability of NATO to move troops and equipment across Europe."[120]

These concerns may be having some effect. In October 2022, German Chancellor Olaf Scholz's government agreed to allow a Chinese company to buy a 25.9 percent stake in one of three terminals at the port of Hamburg. Former EUCOM Commander General Ben Hodges criticized the agreement, noting the critical importance of German ports in bringing American troops and equipment into Europe, especially during a crisis: "[K]nowing that the Chinese may be able to influence or disrupt activities at critical transportation infrastructure, that's a problem."[121] Then, in 2023, Germany's Federal Office for Information Security reclassified the terminal as "critical infrastructure," setting off a security review that could nullify the deal.[122]

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 after 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 and "recognising that there is no military solution to the challenges Afghanistan faces," NATO ended Operation Resolute Support, a non-combat operation intended to provide "training, advice and assistance to Afghan security forces and institutions."[123] The withdrawal of alliance forces was completed in August 2021, and the mission was terminated in September 2021. Currently ongoing operations include:

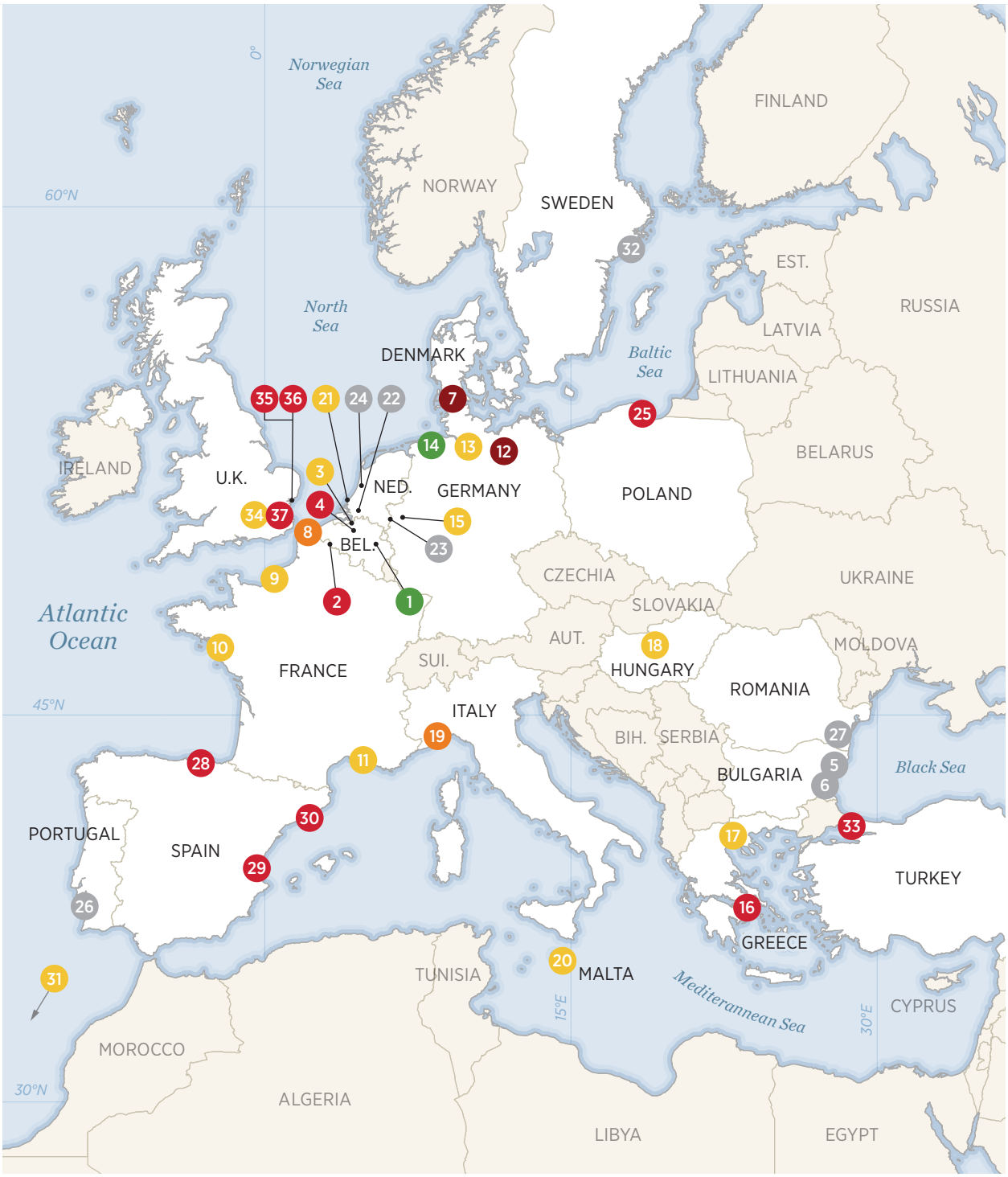
- Kosovo Force (KFOR), which involves 5,081 troops from 31 nations;[124]
- Operation Sea Guardian, which "is NATO's maritime security operation in the Mediterranean and is presently conducting three maritime security tasks: maritime security capacity building, support to maritime situational awareness and maritime counter-terrorism";[125]
- NATO Air Policing, "an integral part of NATO Integrated Air and Missile Defence (IAMD) for 60 years" that covers the Baltic States (Estonia, Latvia, and Lithuania); the Benelux countries (Belgium, the Netherlands, and Luxembourg);

TABLE 5

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

Country	Type	Site/Location	Unknown	Lease	Less than Half	Nearly Half	Majority	Own
Belgium	Airport	Logistics hub at Liège airport		1				
	Port	Zeebrugge (Bruges)					2	
	Port	Antwerp Gateway			3			
	Port	Willebroek Terminal					4	
Bulgaria	Port	Port of Varna	5					
	Port	Port of Burgas	6					
Denmark	Port	Maersk Container Industry (Tinglev)						7
France	Port	Terminal des Flandres (Dunkirk)				8		
	Port	Terminal de France (Le Havre)			9			
	Port	Terminal du Grand Ouest (Nantes)			10			
	Port	Eurofos Terminal (Marseille)			11			
Germany	Airport	Schwerin-Parchim Airport						12
	Port	Port of Hamburg			13			
	Port	Jade-Weser-Port Logistics Center (Wilhelmshaven)		14				
	Railway	Port of Duisburg			15			
Greece	Port	Piraeus Containter Terminal					16	
	Port	Port of Thessaloniki			17			
Hungary	Railway	BILK Kombiterminal (Budapest)			18			
Italy	Port	Vado Reefer Terminal (Genoa)				19		
Malta	Port	Malta Freeport Terminal (Marsaxlokk)			20			
Netherlands	Port	Euromax Terminal (Rotterdam)			21			
	Port	Port of Moerdijk	22					
	Railway	Port of Venlo	23					
	Railway	Port of Amsterdam	24					
Poland	Port	Gdynia Container Terminal					25	
Portugal	Port	Port of Sines	26					
Romania	Port	Port of Constanța	27					
Spain	Port	Noatum Container Terminal (Bilbao)					28	
	Port	Noatum Container Terminal (Valencia)					29	
	Port	Port of Barcelona					30	
	Port	Port of Las Palmas (Canary Islands)			31			
Sweden	Port	Port of Stockholm	32					
Turkey	Port	Kumport Sea Terminal (Istanbul)					33	
U.K.	Airport	Heathrow Airport (London)			34			
	Port	Port of Felixstowe					35	
	Port	Port of Harwich					36	
	Port	London Thamesport (Kent)					37	

SOURCE: Heritage Foundation research.



NOTE: Locations are approximate.

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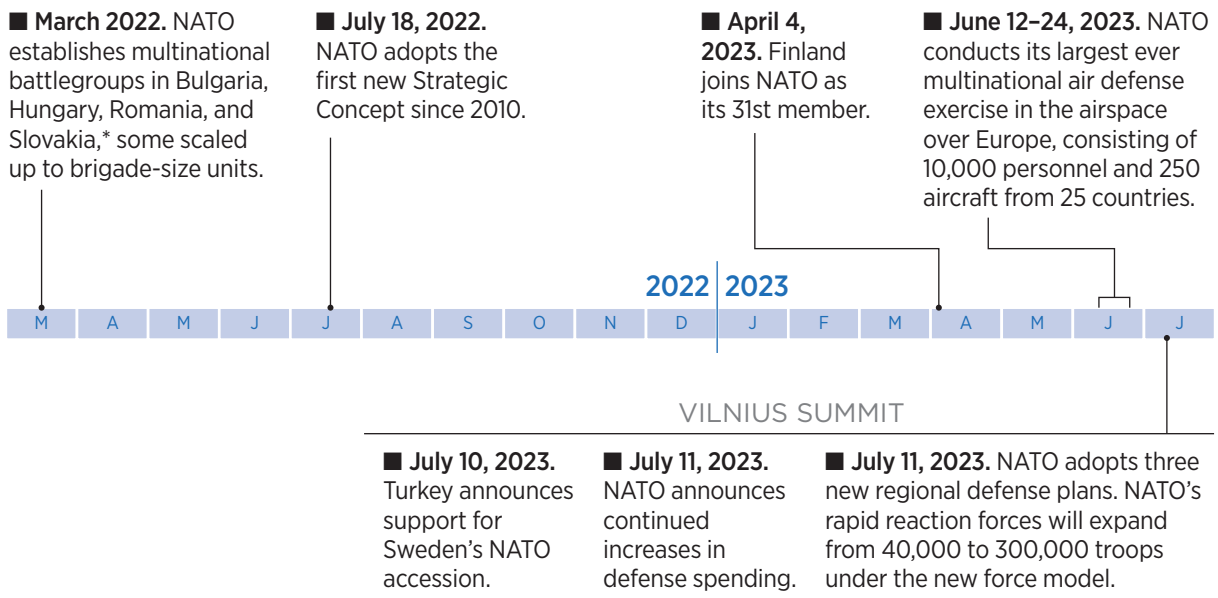
Iceland; and the Adriatic and Western Balkans (Slovenia, Albania, Montenegro, and North Macedonia) in addition to "supplement[ing] the existing NATO Air Policing forces in the Baltic States, deploy[ing] additional aircraft to Poland, and augment[ing] the national air policing capabilities of the Bulgarian and Romanian air forces";[126]

FIGURE 2

Shoring up NATO Defenses: A Timeline of Recent Developments



* In 2017, multinational battlegroups were established in Estonia, Latvia, Lithuania, and Poland.
SOURCES: North Atlantic Treaty Organization press releases and media reports.

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- Support for the African Union Mission in Somalia, which includes "strategic air- and sealift" and "focused support to the African Stand-by Force Concept and its associated projects including exercises, early warning and disaster preparedness";[127] and

- NATO Mission Iraq (NMI), "a non-combat advisory and capacity-building mission that assists Iraq in building more sustainable, transparent, inclusive and effective armed forces and security institutions, so that Iraqis themselves are better able to stabilise their country, fight terrorism and prevent the return of ISIS/Daesh."[128]

Underscoring the value of NATO air policing missions, in 2022, NATO jets scrambled 570 times to intercept Russian military aircraft.[129] This was a significant increase over 2021, when NATO jets were scrambled 370 times.[130]

In May 2022, in a historic shift brought about by Russia's war against Ukraine, Finland and Sweden applied for NATO membership. On April 4, 2023, Finland became the 31st NATO member state.[131] Sweden, whose accession has yet to be ratified by Hungary and Turkey, is likely to become the alliance's 32nd member state. The inclusion of Finland and Sweden brings substantial capabilities to the alliance and enhances the security of the Baltic Sea region.

NATO Responses to Russia's War in Ukraine. On February 25, 2022, for the first time in its history, NATO activated approximately one-third of its 40,000-strong NATO Response Force (NRF).[132] In announcing the activation, General Tod Wolters, then NATO Supreme Allied Commander Europe, stated that the NRF "represent[s] a flexible, combat credible force that can be employed in multiple ways.... These deterrence measures are prudent and enhance our speed, responsiveness and capability to shield and protect the one billion citizens we swore to protect."[133]

In June 2022, the alliance announced that the NRF would be increased from 40,000 to 300,000 troops.[134] Secretary General Stoltenberg noted that

"[f]or the first time since the Cold War, we will have pre-assigned forces to defend specific Allies. So that we can reinforce much faster if needed."[135] At the June 2022 Madrid summit, NATO agreed to a new force model that will "deliver an allied response at much greater scale and at higher readiness than the current NATO Response Force, which it will replace."[136] The new force model envisions having "well over 100,000" troops ready within 10 days, "around 200,000" ready in 10–30 days, and "at least 500,000" ready in 30–180 days.[137] The force model also "involves a more focused and ambitious training and exercise programme, including larger-formation collective defence exercises."[138] Filling out and implementing the NATO force model will take time and will certainly hit snags based on the inability of some allies to generate the forces needed to fulfill their quotas.[139]

NATO's Strategic Concept reaffirms the vitality of the transatlantic alliance and places collective defense of the member states firmly at the heart of NATO. It also clearly identifies the main threat to member states: "The Russian Federation has violated the norms and principles that contributed to a stable and predictable European security order. We cannot discount the possibility of an attack against Allies' sovereignty and territorial integrity."[140]

NATO is updating its regional defense plans pursuant to a Political Guidance for Defence Planning 2023 that was approved by NATO Defense Ministers in February 2023.[141] In 2022, General Cavoli stated that "[w]e're developing strategic, domain-specific and regional defense plans to improve our ability to respond to any contingency and to ensure timely reinforcement."[142] Some planners have concluded that 300,000 troops will be needed to defend against Russian aggression in the eastern part of the alliance. The first readiness tier of about 100,000 soldiers could come from Poland, Norway, and the Baltic States of Estonia, Latvia, and Lithuania, and a second tier would deploy from countries like Germany.

Once regional defense plans are finalized, "capitals will be asked to weigh in—and eventually make available troops, planes, ships and tanks for different parts of the blueprints."[143] More troops from allied nations will be placed under SACEUR's direct command, and "under a new rubric of 'deter and defend,' General Cavoli is for the first time since the Cold War integrating American and allied war-fighting plans."[144] NATO defense planning will likely become "more demanding and specific," and "[i]f the other allies all agree that a country's plan is inadequate, they can vote to force adaptation in what is known as 'consensus minus one.'"[145]

NATO has eight multinational battlegroups, all of which "are integrated into NATO's command structure to ensure the necessary readiness and responsiveness."[146] The first four (Estonia, Latvia, Lithuania, and Poland) were established in 2017 and the second four (Bulgaria, Hungary, Romania, and Slovakia) in 2022. As of June 2023, the composition of these battlegroups was as follows:[147]

Host nation: **Bulgaria**
Framework nation: Italy
Contributing nations: Albania, Greece, Montenegro, North Macedonia, Turkey, and the United States

Host nation: **Estonia**
Framework nation: United Kingdom
Contributing nations: Denmark, France and Iceland

Host nation: **Hungary**
Framework nation: Hungary
Contributing nations: Croatia, Italy, Turkey, and the United States

Host nation: **Latvia**
Framework nation: Canada
Contributing nations: Albania, Czechia, Denmark, Iceland, Italy, Montenegro, North Macedonia, Poland, Slovakia, Slovenia, and Spain

Host nation: **Lithuania**
Framework nation: Germany
Contributing nations: Belgium, Croatia, Czechia, Luxembourg, the Netherlands, Norway, Portugal, and the United States

Host nation: **Poland**
Framework nation: United States
Contributing nations: Croatia, Romania, and the United Kingdom

Host nation: **Romania**
Framework nation: France
Contributing nations: Belgium, Luxembourg,

the Netherlands, North Macedonia, Poland, Portugal, and the United States

Host nation: **Slovakia**
Framework nation: Czechia
Contributing nations: Germany, Slovenia, and the United States

At the Madrid summit, "Allies agreed to enhance the multinational battlegroups from battalions up to brigade size, where and when required."[148] This phrasing has led to differing interpretations with host nations usually supporting a beefed-up presence on the ground and contributing nations preferring to maintain a smaller footprint. For example, while the United Kingdom briefly doubled its troop presence in Estonia in 2022, for 2023, the Ministry of Defence (MOD) decided that "[i]nstead of the additional battlegroup, the UK will hold at high readiness the 'balance of a Brigade' in the UK, available to deploy if needed. The UK will also 'surge' forces throughout the year for exercises, enhance its headquarters and provide support to Estonian armed forces."[149] Similarly, Lithuania has publicly called for a German brigade to deploy to Rukla, and German Chancellor Scholz has said that the decision on permanent deployment of a brigade is "up to NATO."[150] France deployed a Brigade Forward Command Element to Romania in November 2022[151] but remains cagey about sending additional troops as it seeks to advance further French contracts with Romania.[152]

NATO has also 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."[153]

The U.S.-led DEFENDER (Dynamic Employment of Forces to Europe for NATO Deterrence and Enhanced Readiness) exercises are some of the largest undertaken by the NATO allies. According to U.S. Army Europe and Africa, DEFENDER Europe 23, which was conducted in April, May, and June 2023, was "a U.S. European Command directed multi-national, joint exercise designed to build readiness and interoperability between U.S. and NATO allies and partners" and was intended to "include more than 7,000 U.S. and 17,000 multi-national service members from more than 20 Allied and partner nations"; "demonstrate U.S. Army Europe and Africa's ability to quickly aggregate combat power in Eastern Europe"; increase lethality of the NATO Alliance through long-distance fires"; "build unit readiness in a complex joint, multi-national environment"; and "leverage host nation capabilities to increase operational reach."[154]

As part of these exercises, in June, "250 military aircraft, including 100 from the United States," participated in Air Defender 2023, "the biggest air defense exercise of its kind in the history of the Euro-Atlantic military alliance"[155] and the U.S. Air National Guard's "largest deployment across the Atlantic since the Gulf War."[156]

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. Currently, seven aircraft are operating out of Eindhoven air base in the Netherlands and Germany's Cologne–Wahn air base. The eighth and ninth are to be delivered in 2024 and a tenth, ordered in March 2023, in 2026. The tankers were active for the withdrawal from Kabul in 2021 and continue to aid in refueling missions along NATO's eastern flank, having flown 500 refueling missions in 2022.[157]

In November 2019, NATO announced a $1 billion upgrade of its Airborne Warning and Control System (AWACS) planes. The upgrades "will provide AWACS with sophisticated new communications and networking capabilities, including upgrades to the NE-3A's data link and voice communications capabilities, and enhanced Wide-Band Beyond Line-of-Sight airborne networking capability" and will extend the aircrafts' service life to 2035.[158] In February 2023, NATO began its assessment of industry bids to replace its AWACS fleet under the Allied Future Surveillance and Control (AFSC) capability program, which aims to define 'a new generation of surveillance and control capabilities'...intended to integrate 'multiple capabilities and platforms' for future multidomain operations."[159] In January 2023, NATO deployed three AWACS and 180 military personnel to a Romanian air base near Otopeni where the aircraft operated for "several weeks."[160] NATO's Alliance Ground Surveillance system consists of five RQ-4D Phoenix remotely piloted aircraft based out

of Sigonella, Italy, along with ground command and control stations, and provides "a state-of-the-art Intelligence, Surveillance and Reconnaissance (ISR) capability to NATO."[161]

In 2018, NATO established two new commands with a combined total of 1,500 personnel: a Joint Force Command for the Atlantic based in Norfolk, Virginia, and a logistics and military mobility command headquartered in Ulm, Germany.[162] Logistics has recently been a significant alliance focus. In November 2022, the chairman of NATO's Military Committee stated that "[i]n many, many nations—not only the eastern flank—but in many, many nations, there are shortfalls in infrastructure."[163] 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.[164] In November 2022, for example, French tanks traveling through Germany to exercises in Romania were denied transit because their weight exceeded regulations and once inside Romania had to use a circuitous route to get to their base because structural deficiencies had caused a key bridge to be closed.[165]

NATO has worked with the European Union, which retains competencies that are critical to improving military mobility, particularly with regard to overcoming legal and regulatory hurdles, to overcome these barriers. In May 2021, NATO Deputy Secretary General Mircea Geoană noted that continued improvements are needed in such areas as "regulations for swift border-crossing, close coordination between military forces and civil government bodies, access to necessary transport capabilities, and ensuring that national transport infrastructure is fit for purpose."[166] Former U.S. EUCOM Commander Hodges has described the issue facing the alliance in stark terms: "We do not have enough transport capacity, or infrastructure that enables the rapid movement of NATO forces across Europe," adding that "[w]hat we have learned from Russia's war against Ukraine is... that war is a test of will, and it's a test of logistics."[167]

Some allies are investing heavily on their own to address infrastructure issues. Poland, or example, is building a €35 billion Solidarity Transport Hub, a project that involves building roads, rails, an airport, military infrastructure, and bridges with a completion goal of 2028. Polish officials promise that "[i]t will be a place where large tactical connections, large amounts of ammunition, supplies and logistics can be taken to Poland very quickly."[168]

In April 2022, the alliance established the Defence Innovation Accelerator of the North Atlantic (DIANA). With a $1.1 billion "innovation fund" that will invest in "deep-tech startups" over a 15-year period and working through "more than 10 accelerator sites and over 50 test centers," DIANA is "tasked to bring innovative civilian and military organizations closer together to develop cutting-edge solutions in the realms of emerging and disruptive technologies" such as artificial intelligence, autonomy, big-data processing, biotechnology, hypersonic technology, new materials, propulsion, quantum-enabled technologies, and space-related systems.[169] DIANA's charter was approved in June 2022, and in December, the board of directors "agreed that energy resilience, secure information sharing and sensing and surveillance will be the priority areas of focus for DIANA's work on Emerging and Disrupting Technologies (EDTs) in 2023."[170]

Cyber Capabilities. NATO's 2022 Strategic Concept states that:

> Maintaining secure use of and unfettered access to space and cyberspace are key to effective deterrence and defence. We will enhance our ability to operate effectively in space and cyberspace to prevent, detect, counter and respond to the full spectrum of threats, using all available tools. A single or cumulative set of malicious cyber activities; or hostile operations to, from, or within space; could reach the level of armed attack and could lead the North Atlantic Council to invoke Article 5 of the North Atlantic Treaty.[171]

Through the NATO Industry Cyber Partnership, NATO has invested in a stronger relationship with industry. This partnership includes "NATO entities, national Computer Emergency Response Teams (CERTs) and NATO member countries' industry representatives" and is also relevant for small and medium enterprises, which can often provide innovative solutions in cyberspace." Participants are "encouraged to share reports of intrusion events, participate in damage assessments with the NCI Agency and report any cyber security incident that may be of interest to NATO."[172]

Cooperation within NATO is also facilitated by two other entities.

- The NATO Intelligence on Cyberspace Community of Interest was created "to more regularly exchange information, assessments and best practices—improving NATO's ability to prevent and respond to cyber threats."[173]

- The NATO Communications and Information Agency "is responsible for ensuring that the Alliance has the secure networks, communications and software it needs to guarantee peace and stability for all Allies." It "also runs the NATO Cyber Security Centre, which is responsible for 24/7 monitoring and defending NATO's networks from cyber attacks and malicious activity" and upon request "helps Allies and partner countries boost their capabilities in areas such as cyber defence."[174]

With respect to the likely effects of Chinese 5G technology on the sharing of intelligence in Europe, U.S. officials have said that relying on Chinese state-controlled companies for next-generation wireless networks would be "nothing short of madness."[175] A Chinese presence in European telecommunications networks could decisively compromise the communications integrity of both the military and the intelligence community. The 2021 Brussels Statement notes that "NATO and Allies, within their respective authority, will maintain and enhance the security of our critical infrastructure, key industries, supply chains, and communication information networks, including 5G."[176] In April 2023, General Cavoli testified that:

> The PRC's efforts to expand Huawei 5G networks throughout Europe via PRC state-sponsored firms pose security risks to our Allies and partners. These activities allow the PRC to access and exploit intellectual property, sensitive information, technology, and private personnel information. Beyond economic impacts, these technology-related activities provide the PRC a military capacity that put U.S. national interests in the USEUCOM AOR at risk.[177]

Many nations have decided to restrict Chinese vendors from 5G networks, but these threat perceptions are not uniform, and even within nations that have taken a more restrictive approach, implementation of decisions remains a significant variable.

Recent research sheds perspective on the cascading impact on NATO member states of China's becoming embedded in the 5G networks:

> Huawei's emergence as a dominant fifth-generation (5G) telecommunications infrastructure supplier for many countries gives Beijing access to key parts of emerging communications networks, generating choke points of vulnerability for Allied nations. Within fifteen years, 5G is likely to be replaced by dual-use 6G technologies with embedded AI-enabled capabilities of military significance. China is likely to incorporate them into its civil-military fusion strategy, as it has with 5G.[178]

The impact of the current patchwork approach to Chinese 5G technology on the European operating environment is a risk that should not be underestimated.

Space. The most recent Secretary General's annual report discusses NATO's increasingly important work in the space domain:

> The space security environment has become more dangerous and unpredictable. At the 2022 Madrid Summit, Allies underlined that strategic competitors and potential adversaries are investing in technologies that could restrict the Alliance's access and freedom to operate in space, degrade space capabilities, target civilian and military infrastructure, impair defence and harm security. The 2022 Strategic Concept highlights that maintaining secure use of and unfettered access to space and cyberspace is key to effective deterrence and defence. NATO Leaders have committed to enhancing the ability to operate effectively in space and cyberspace to prevent, detect, counter and respond to the full spectrum of threats, using all available tools. NATO Leaders also agreed to boost the resilience of space capabilities.[179]

To enhance its awareness and common understanding of the space environment, NATO

announced plans in 2021 to develop a Strategic Space Situational Awareness System at its Brussels headquarters. The system is being established with funding from Luxembourg and will "allow the Alliance to better understand the space environment and space events, and their effects across all domains."[180] The NATO Space Center established in 2020 at Ramstein, Germany, continues to increase its connections with national space centers. According to the alliance, following Russia's full-scale invasion of Ukraine, "NATO Space Centre continuously supported the Alliance's situational awareness, posture management and decisionmaking. In addition, satellite images delivered by Allies were critical for timely intelligence and for monitoring the situation."[181]

In addition, NATO's military authorities have accepted an offer from France to establish a NATO Centre of Excellence devoted to space in Toulouse. In 2022, space operational activities were integrated into several exercises, including "Loyal Leda 2022, Neptune Strike 2022, Coalition Warrior Interoperability Exercise 2022 and Dynamic Mongoose 2022. These exercises help to maintain the Alliance's advantage and agility, as well as its ability to withstand jamming and other attempts to disrupt its access to space."[182]

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. For example:

- An Aegis Ashore site in Deveselu, Romania, became operational in May 2016, and upgrades were completed in August 2019.[183]

- An AN/TPY-2 forward-based early warning BMD radar is located at Kürecik, Turkey, pursuant to the U.S. European Phased Adaptive Approach (EPAA).[184]

- BMD-capable U.S. Aegis-equipped ships are forward deployed at Rota, Spain.[185] General Wolters has characterized Rota's four current destroyers as the "workhorses of deterrence," adding that "[w]e currently have a set number of four and the request is for two additional and we have infrastructure in place to be able to house all six in Rota, Spain."[186] In June 2022, the U.S. announced its intention to increase the number of destroyers at Rota to six.[187] In January 2023, Spain approved the plan to base two new destroyers at Rota in 2024 and 2025.[188]

- A second Aegis Ashore site in Redzikowo, Poland, was commissioned in September 2020. In March 2023, officials stated that the facility would become operational by the end of the year after summer and fall testing was completed.[189]

- Ramstein Air Base in Germany hosts the command center.[190]

- The U.K. operates an early warning BMD radar at RAF Fylingdales in England. In May 2022, the U.K. announced that its Type 45 destroyers would be upgraded with BMD-capable missiles.[191]

The May 2023 Formidable Shield 23 exercise, which "took place over a 1,000 nautical mile area of water space, from northern Norway to the west coast of Scotland," involved "multiple NATO Allied and partner nations, more than 20 ships and 35 aircraft, and nearly 4,000 personnel from across the NATO Alliance" who "fired 30 missiles across 23 live-fire scenarios against subsonic and supersonic targets testing capability in the air, land and maritime domains."[192]

In January 2017, the Russian embassy in Norway threatened that if Norway contributed ships or radar to NATO BMD, Russia "[would] have to react to defend our security."[193] Norway operates four *Fridtjof Nansen*–class Aegis-equipped frigates that are not currently BMD-capable.[194] A fifth Aegis-equipped frigate, the *Helge Ingstad*, collided with an oil tanker and sustained so much damage that the government decided to scrap it in 2021.[195]

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.[196] Russia's ambassador in Copenhagen responded by publicly threatening Denmark: "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."[197]

In March 2019, the first 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."[198] In May 2022, the Netherlands announced that for budget reasons, only two of four frigates will receive the radar upgrade and missile upgrades.[199] In May 2021, as part of NATO's Formidable Shield exercise, radar aboard the HNLMS *De Zeven Provinciën* "was used to eliminate a ballistic missile, marking a first in Europe."[200] 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.

The Netherlands and Belgium are jointly procuring two anti–submarine warfare (ASW) frigates apiece, the first of which are to be delivered to the Royal Netherlands Navy and Belgium in 2029 and 2030, respectively.[201] The vessels will be equipped with the Evolved Sea Sparrow Missile.[202] 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."[203]

Spain currently "operates five F-100 *Alvaro de Bazan*–class Aegis frigates and in 2024 will accept the first F110–class frigate."[204] Spain's F-100 frigates are not BMD-capable.[205] In April 2019, Spain signed an agreement to procure five F-110 multi-mission frigates, the first of which will likely be deployed in 2026. These frigates "will host the [Spanish Navy's] first naval solid-state S-band radar," which "will form part of the Aegis Weapon System of the ship's combat management system SCOMBA."[206]

The Italian Navy is procuring seven multi-role offshore patrol vessels (PPAs) that are to be delivered from 2021–2026. The first of two BMD-capable PPAs in full configuration is scheduled for delivery in 2024.[207]

Quality of Armed Forces in the Region

Article 3 of the 1949 North Atlantic Treaty, NATO's founding document, states that members at a minimum "will maintain and develop their individual and collective capacity to resist armed attack."[208] Regrettably, only a handful of NATO members are living up to their Article 3 commitments.

In 2022, only seven NATO countries spent the required minimum of 2 percent of GDP on defense: Estonia (2.12 percent); Greece (3.54 percent); Latvia (2.07 percent); Lithuania (2.47 percent); Poland (2.42 percent); the United Kingdom (2.16 percent); and the United States (3.46 percent).[209] However, NATO defense spending continues its upward trend: According to the NATO Secretary General's annual report for 2022, "European Allies and Canada have increased defense spending for the eighth consecutive year. From 2021 to 2022, defense spending increased by 2.2% in real terms. In total, over the last eight years, this increase added USD 350 billion for defense."[210]

Although less than a third of member states are attaining the 2 percent benchmark, 24 of 30 member states attained the second benchmark by spending 20 percent of defense budgets on equipment in 2022.[211]

Germany. In February 2022, German Chancellor Olaf Scholz characterized Russia's full-scale invasion of Ukraine as a "turning point" and pledged that "from now on, we will invest more than 2% of gross domestic product in our defense year for year."[212] An immediate component of Scholz's pledge was approval of a onetime €100 billion ($107 billion)[213] procurement fund to rebuild the nation's military forces. Germany's Basic Law (constitution) was amended to allow for creation of the special fund, which is financed through loans.[214]

Despite Scholz's pledge, Germany managed to spend only 1.44 percent of GDP on defense in 2022, although it did hit the second NATO spending benchmark by spending 20.9 percent if its defense budget on equipment.[215] The Ministry of Defence has stated that €30 billion of the €100 billion is already designated for specific contracts.[216] However, some analysts have noted that inflation, taxes, and rising interest payments on the loan have left only €50 billion to €70 billion for actual equipment purchases.[217]

Germany's decision to acquire new equipment has been hampered by a sclerotic procurement bureaucracy and long delivery times once decisions are made. In addition, many important areas such as rising fuel costs are not covered by the special fund. As a result, Defense Minister Boris Pistorius is reportedly seeking a €10 billion increase in the

regular German defense budget.[218] According to a Defence Ministry spokesperson, "it is clear that we need a constantly increasing defence budget to cover the needs of the military and to be able to react to conditions such as inflation and price increases."[219]

In 2022, Germany increased the total number of its troops in Lithuania, where it serves as the framework nation for NATO's EFP battalion, from 1,000 to 1,500.[220] In September, Germany permanently deployed the command unit (100 troops plus "equipment for command and control, communications and logistics") of a brigade with 3,000–5,000 personnel; combat units remain based in Germany and rotate to the region for exercises.[221] German officials have stated that the brigade could be sent to Lithuania within 10 days in the event of conflict. Lithuanian Defense Minister Arvydas Anusauskas has said that "[t]he defence strategy of the Baltic states cannot rely only on reinforcements. It has to also rely on trustworthy in-place capabilities. Our geography demands it."[222] Lithuanian Foreign Minister Gabrielius Landsbergis, however, has stated that the facilities in his nation will not be ready to accept a full German brigade until 2026.[223]

Germany and Lithuania plan to spend €200 million over the next few years to upgrade facilities used in part by NATO's EFP. This project will include "building barracks, command spaces, a canteen and training places."[224]

In April 2022, Germany deployed Ozelot short-range self-propelled air defense systems with Stinger missiles to Rukla.[225] In August 2022, NATO's Allied Air Command announced that "[i]n the coming months, Germany augments NATO's Air Policing mission with their Eurofighter jets flying out of Ämari" and that this was "the 13th time German Air Force fighters support the mission in the Baltic region; Germany led BAP five times in 2005, 2008, 2009, 2011, and 2012, and was the augmenting nation at Ämari—once a year since 2014."[226] In March 2023, the Luftwaffe announced the initiation of "[j]oint NATO Baltic Air Policing (BAP) missions involving German and British Eurofighter Typhoons" and that "[t]his joint detachment—the first of its kind—will operate under German command until the end of March, after which the German fighters will remain in Estonia throughout April with the mission under British command."[227]

Germany maintains 68 troops in Kosovo as part of NATO's Kosovo Force.[228] In February 2023, the Bundestag extended the mandate for "up to 550 soldiers" to participate in NATO's Sea Guardian maritime security operation through March 31, 2024[229] and approved a one-year extension, also through March 31, 2024, of Germany's participation in the United Nations Mission in South Sudan (UNMISS).[230]

In May 2022, Germany announced the end of its participation in the EU Training Mission Mali (EUTM), where 300 German soldiers had served.[231] In November 2022, Germany announced that it would be ending its participation in the U.N.'s Multidimensional Integrated Stabilization Mission in Mali (MINUSMA) and that all troops would be withdrawn by the end of 2023. Germany took part in MINUSMA for a decade with up to 1,400 troops but faced difficulties that included the breakdown in relations between France and the military junta in Mali, the growing regional presence of Russian mercenaries, and the frequent need to "suspend reconnaissance patrols after being denied flyover rights."[232]

In the Middle East, German forces participate in the United Nations Interim Force in Lebanon (UNIFIL) peacekeeping mission, the mandate for which extended through June 2023.[233] In October 2022, Germany extended its non-combat training mission in Iraq and its air-to-air refueling, air surveillance radar, and air transport missions in support of the counter-ISIS coalition through the end of October 2023.[234]

Germany assumed lead authority for NATO's VJTF in 2023 and "is providing up to 2,700 soldiers as lead nation"[235] with Lithuania, Belgium, Latvia, the Netherlands, Czechia, Slovenia, Luxembourg, and Norway also contributing.[236] In addition, "[f]or the first time, Germany also leads the VJTF's designated Special Forces command."[237] In June 2022, Germany announced that it would contribute "15,000 soldiers, 65 aeroplanes, 20 navy units, and other formations to the New Force Model" that was announced at the NATO Summit in Madrid, thereby greatly increasing the strength of the NRF.[238] Germany also has reportedly "agreed to provide NATO with a first operational land division in 2025 to support the Very High Readiness Joint Task Force (VJTF), while long-term targets of providing a modern mechanized division by 2027 and a further two divisions, to the alliance by 2031, both remain."[239]

Although Germany's forces have taken on additional roles in recent years, its military continues

to suffer serious equipment, personnel, and readiness issues. In early 2023, Defence Minister Boris Pistorius stated that decades of neglect had left Germany with "no armed forces that are capable of defending [Germany] that is, capable of defending [it] against an offensive, brutally waged aggressive war." In February, Chief of the German Army Lieutenant General Alfons Mais noted similarly that "[t]he army that I have the duty to lead is more or less bare." One evocative example is the reality that only 30 percent of the Army's 300 Leopard 2 tanks are operational.[240]

The navy is not much better off. Problems with submarines include "long yard periods, difficulties with main batteries and the practice of 'controlled removal' from some submarines in order to keep others operational."[241] Reports surfaced in March 2021 that "at least 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."[242]

According to Parliamentary Commissioner for the Armed Forces Eva Hoegl's most recent annual report, "compensat[ing] for all shortages...would require a total of EUR 300 billion," and it "would take around half a century to completely modernise merely the infrastructure of the Bundeswehr already in existence."[243] Among the many issues raised in the report are kit shortages; shoddy infrastructure; unprofessional and overly bureaucratic personnel management; barracks with walls propped up by sandbags; 66 parachuting accidents; clothing shortages; lack of adequate gear for protecting against biological, chemical, and nuclear attacks; tank shortages that routinely lead to training cancellations; and ammunition shortages. The report estimates that "replenish[ing] the empty ammunition storage sites" would cost "at least EUR 20 billion" but that only "EUR 1.125 billion is available for this purpose in 2023."[244]

A memorandum from the Inspector of the Army to the Inspector General of the Bundeswher reportedly states that "without countermeasures," Germany will not be able to meet its commitment to field a fully equipped Army division by 2025 and calls plans for a second division by 2027 "unrealistic." The memo reportedly states that under current conditions, "the army will not be able to hold its own in high-intensity combat and will also only be able to fulfill its obligations to NATO to a limited extent."[245]

Challenges to the rebuilding of Germany's military capabilities include a lack of domestic industry capacity, a need to rely on manufacturers to repair and upgrade equipment, manpower shortages, and an outdated and slow procurement structure.[246] "The first projects are on the way," Defence Commissioner Hoegl has said, "but in 2022 our soldiers still haven't received a single cent from special funds."[247] In January 2023, German officials announced plans to use money from the special fund to purchase "for every soldier in the German armed forces in the next three years" such items as "protective gear, helmets, night vision goggles, [and] rucksacks."[248]

In March 2022, Germany announced an $8.4 billion deal to purchase 35 F-35A fighters "as replacement for the Tornado in the role of nuclear sharing." The Tornados are to be phased out between 2025 and 2030. The Luftwaffe also announced the purchase of 15 Eurofighter Typhoons "equipped for electronic warfare."[249] German pilots will be trained on the platform in the U.S. beginning in 2026, and training will then move to Germany in 2027, and initial operational capability should be declared in 2028. The planned F-35 base at Büchel will require major upgrades to be ready by 2027.[250]

Germany has stated that these purchases do not change its commitment to take part in the Future Combat Air System (FCAS). In December 2022, a contract was awarded to develop a flying demonstrator for the FCAS with "in flight demonstrators" sought by 2028 or 2029. This contract covers "FCAS Phase 1B. Running for around three and a half years, this phase will include broader research and technology (R&T) elements, as well as the flying demonstrators themselves and related subsystems."[251] FCAS, which is funded in equal measure by France, Germany, and Spain, has been slowed by industry "[w]orkshare-related delays."[252] After delays awaiting U.S. approval, which is needed because "the Arrow-3 includes technological components developed in the US," Germany intends to procure the Israeli-made Arrow-3 anti-ballistic missile defense system for $3.1 billion once the Bundestag has given its required approval.[253] In March 2021, 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.[254]

Pursuant to Germany's offer to send Poland three Patriot missile batteries to help defend against incoming missiles, the first two were sent in January 2023 along with 350 German troops.[255] The batteries are stationed at Zamość, and "the system comprises more than 10 elements, including radars, guiding units and launchers, which can hold between four and sixteen missiles each."[256] The performance of the IRIS-T air defense system in Ukraine led Germany to purchase eight systems for itself in February.[257]

Germany operates Europe's largest fleet of heavy transport aircraft and has taken delivery of 40 of 53 A400M cargo aircraft ordered.[258] France and Germany are procuring a joint transport capability with C-130J Hercules aircraft and KC-130J tankers. The French Air and Space Force and the German Luftwaffe are providing two and three of each aircraft, respectively, and all should be received by the end of 2024 with full operating capability expected by 2024–2025.[259] A new joint training center for both aircraft in Normandy is scheduled to begin operations in 2024.[260] The aircraft will be based at Évreux, France, where "this binational air transport squadron will have unrestricted exchange of aircraft, air crews, and maintainers, as well as technical and logistical support based on a common pool of spare parts and a common service support contract."[261]

Germany announced the end of its P-3C ORION maritime patrol aircraft (MPA) modernization program in June 2020. In July 2021, Germany's Defence Ministry signed a letter of offer and acceptance to procure five P-8 Poseidon maritime patrol aircraft under the U.S. government's Foreign Military Sales process.[262] In September 2021, Boeing signed a contract with the U.S. Navy to produce the five planes at a "total price tag" of $1.6 billion with deliveries to begin in 2024.[263] In April 2022, "sources confirmed that the German Navy will add 7 additional Boeing P-8A Poseidon to complete a fleet of 12 Maritime Patrol Aircraft (MPA)."[264] In July, parliament approved a $344 million support package for things like training, future software upgrades, and spare parts.[265]

In June 2022, Germany announced plans to purchase 60 Block 2 CH-47F Chinook transport helicopters at a cost of $5.36 billion. Each helicopter will have "an aerial-refueling probe to enable connections with the Lockheed KC-130J Hercules and potentially the Airbus A400M airlifter configured as a tanker."[266]

In April 2022, an agreement was struck for the procurement of 140 missiles for Germany's five Heron TP unmanned aerial vehicles (UAVs).[267] Armed drones have been a contentious political issue for years in Germany, resisted in large part by the Social Democrats. That the decision has now been taken is a significant shift. Germany, France, Italy, and Spain plan to acquire a collective fleet of Eurodrones at an estimated total cost of $7.5 billion. Germany will have seven systems, each with two ground stations and three aircraft.[268]

In January 2023, officials stated that all Leopard 2 main battle tanks would be upgraded to the 2A7 configuration; the upgrades, which include digitizing the tanks' turrets, are expected to keep the Leopards in service until 2045.[269] Germany continues to work with France on development of the Main Ground Combat System (MGCS), which will replace both nations' MBTs[270] and is currently projected to reach full operational capability in 2040.[271] In addition, contract negotiations are "underway for 133 Boxer heavy weapon carrier (HWC) armored vehicles, which will see deliveries start in 2025 and run through to 2030."[272]

Germany's troubled F-125 *Baden-Württemberg*–class frigate procurement has been completed. In December 2017, the frigate failed sea trials because of "software and hardware defects."[273] It 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.[274] In addition, the frigate's ability to defend against aerial attack is so deficient that the ship may be fit only for "stabilization operations," and the lack of sonar and torpedo tubes makes it vulnerable to attack by submarines.[275] Germany returned the ship to the shipbuilder following delivery.[276] The redesigned *Baden-Württemberg* was belatedly commissioned in June 2019, and Germany took delivery of the fourth and final F-125 in January 2022.[277]

In January 2020, Germany awarded a $6.7 billion contract to the Dutch Damen Shipyards for the next-generation F-126 frigate.[278] Damen is building the frigates "together with its [German] partners Blohm+Voss and Thales," and the first of four ordered (with the possibility of another two) is to be delivered in 2028.[279] In November 2022, Damen

signed an agreement with Rheinmetall to produce two MLG27-4.0 naval guns for each vessel.[280]

In July 2021, Germany and Norway signed an agreement for a joint program to construct six Type 212CD submarines, two for Germany and four for Norway, the first of which are to be delivered to the Norwegian Navy in 2029 with Germany taking delivery of its submarines in 2032 and 2034.[281] German K130 Corvette procurement is currently at least two years behind schedule, and it is not expected that the first of five vessels will be commissioned until 2025 at the earliest.[282]

Germany has increased its presence in the Indo-Pacific. The frigate *Bayern* returned in February 2022 from a seven-month deployment that included official port visits to Australia, Japan, India, Israel, Pakistan, Singapore, South Korea, Sri Lanka, and Vietnam.[283] In March 2022, the Luftwaffe deployed six Eurofighters, four transport aircraft, three air-to-air refueling tankers, 100 tons of matériel, and 250 soldiers to Darwin, Australia, for military exercises with allies. Transferring the deployment to Singapore en route to Darwin took place in less than 24 hours as part of a "strategic deployment capability."[284]

German Indo-Pacific deployments are visible and strategically valuable, but they also strain the military. According to one analyst, the six-month deployment of the *Bayern* to the Mediterranean, Indian Ocean, and Pacific theater beginning in August 2021 "came 'at the price of gutting the fleet,' with ship maintenance plans and training schedules altered to accommodate the *Bayern* mission." Even Germany's robust contribution to Baltic Air Policing closer to home "takes everything it has, often at the expense of training initiatives."[285]

Germany also suffers from a shortage of personnel. The military, which as of December 31, 2022, included "183,051 service personnel," has "a long way to go to achieve the target figure [of 203,000 personnel] by 2031, especially with numbers of applications also declining significantly by around 11 per cent in [2022]."[286]

Germany's significant cultural aversion to military service remains a difficult obstacle to overcome. A survey in August 2022 found that "52 percent of Germans said the country should continue practicing restraint in international crises, and 68 percent rejected the notion that Germany should become a leading military power in Europe."[287]

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

In 2022, France spent 1.89 percent of GDP on defense and 28.55 percent of defense spending on equipment, just short of both NATO benchmarks.[288] In January 2023, President Emmanuel Macron announced a major increase in defense spending: a planned $450 billion for 2024—2030 compared to $320 billion for 2019—2025, an increase of over one-third.[289] The previous military program law (LPM) focused on expeditionary forces and counterterrorism; the upcoming LPM will focus largely on high-intensity state-on-state warfare.[290] France is also planning to add €1.5 billion to its 2023 defense budget with increases of €3.1 billion in 2024; €3 billion each year in 2025, 2026, and 2027; and €4.3 billion each year in 2028, 2029, and 2030.[291]

Following the Cold War, France drew down the capabilities needed for peer-to-peer conflict. Between 1991 and 2021, "the number of battle tanks dropped from 1,349 to 222, the number of fighters from 686 to 254, the number of large surface ships from 41 to 19 and its active-duty manpower from 453,000 to 203,000." "Today, the French Army is beautiful," French General Eric Laval has said, "but in a high intensity conflict, would it be able to hold beyond 48 hours? High intensity would imply potentially very tough battles which could last between 72 to 96 hours and which we are not allowed to lose." Chief of the Army General Pierre Schill has described the current transformation process as the "most important modernization undergone since World War II."[292]

The new LPM focuses on such areas as nuclear modernization, drone/anti-drone technology, air defenses, and intelligence gathering.[293] "Nuclear deterrence," according to President Macron, "is an element that makes France different from other countries in Europe. We see anew, in analysing the war in Ukraine, its vital importance."[294] French intelligence agencies will see a 60 percent increase in their budgets, although some analysts have predicted that high energy prices and inflation will reduce the value of that increase. "Capabilities in all layers of air defense will increase by at least 50 percent," Macron has explained, "obviously including anti-drone technologies." Long-range strike capability,

the suppression of enemy air defense, and anti-submarine warfare "are all part of these priorities."[295]

The LPM also calls for France to maintain a focus on its overseas territories, particularly in the Indo-Pacific,[296] and to expand industrial capacity. "An issue we unfortunately rediscovered with the war in Ukraine is the issue of the ammunition stocks," Armed Forces Minister Sébastien Lecornu has said. "We will need a ten-year period of time to upgrade all infrastructures and equipment of our military."[297]

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.[298] It also has been introducing new A330 MRTT (Multi-Role Tanker Transport) aircraft and as of April 30, 2023, had received nine of 13 ordered.[299] France has received 21 of 50 A400M Atlas military transport aircraft ordered, and the "military programming law plans for a fleet of 25 A400Ms to be in service in 2025."[300] 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.[301]

In January 2023, Macron announced that France would move to an "all-Rafale force" by 2035.[302] France signed a $2.3 billion agreement with Dassault Aviation in January 2019 for development of the F4 Standard upgrade to the Rafale fighter aircraft, the first of which was received in March 2023. The "new standard includes upgrades to existing capabilities like the Thales AESA radar and Talios targeting pod along with the Rafale's electronic warfare system and communications suite," and "the Thales Scorpion Helmet Mounted Display, MBDA's MICA NG (Next-Generation) air-to-air missile and the 1,000 kilogram variant of Safran's AASM (armement air-sol modulaire) 'Hammer' precision-guided munition" are among the plane's "new capabilities."[303] France is expecting to receive 13 Rafales during the year with deliveries of another 40 to be completed by 2025.[304] Forty-two additional Rafales will be ordered in 2023, partly to backfill aircraft sold to Croatia in 2021.

Introduction of the Rafale F5 standard is planned for the 2035–2038 period. It is expected that the F5 will "further improve connectivity," "have enhanced manned/unmanned teaming capabilities," and "be capable of carrying the new ASN4G hypersonic ramjet missile, which will ensure the continuity of the airborne component of the French nuclear deterrent, replacing the ASMP-A missile."[305]

In May 2021, France, Germany, and Spain signed an agreement to develop a flying demonstrator aircraft for the Future Combat Air System (FCAS), which is to begin entering service in 2040.[306] In December 2022, the governments working on FCAS awarded a $3.4 billion contract to develop flying demonstrators by 2028 or 2029.[307] In March 2022, France announced that it would upgrade 42 of 67 Tiger MkIII attack helicopters at a cost of $3.06 billion with delivery expected in 2029.[308] Because a lack of German interest has made the planned capability upgrades increasingly unaffordable, "the less extensive Tiger upgrade now planned may lack new missiles," although it "retains sensors and communication enhancements that perhaps can be paired with pre-existing advanced missiles...."[309]

France established a 220-person Space Command under the French Air Force in September 2019. In September 2022, Prime Minister Élisabeth Borne announced that France would increase its space investments by 25 percent ($9 billion) over the next three years with launch vehicles as "a major priority."[310] In January 2021, NATO approved a Center of Excellence for Military Space to be located alongside French Space Command in Toulouse. The first researchers arrived in 2021, and the center is to be fully staffed by 2025.[311]

France intends to have a "fully capable" system to defend its space assets in place by 2030. "If our satellites are threatened," then-Armed Forces Minister Florence Parly stated in 2019, "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."[312] However, in November 2022, France pledged "not to conduct destructive direct-ascent anti-satellite missile tests."[313]

In March 2021, with German and U.S. space forces also participating, France launched AsterX, its first military exercise in space, "to evaluate its ability to defend its satellites and other defense equipment from an attack."[314] AsterX 23 took place in February and March 2023, again with the U.S. participating. Instead of "the time-lapse approach used in previous editions, the 2023 iteration took place "in real-time," which "provides increased tactical realism during the phases of data processing

and space situation analysis."[315] France is reportedly working on a ground-to-space laser system and planning to launch "a new orbital space surveillance project, using nanosatellites to patrol Geostationary Orbit (GEO), identify potential on-orbit threats to national assets, and if necessary, disable the threat with an on-board laser."[316]

Army procurements include Kochi HK416 Assault Rifles, more than 50 percent of which had been delivered as of March 2022; 300 ANAFI USA micro-drones; and 364 Serval Armored Vehicles ordered in 2021 with the possibility of more than 900 being ordered by 2030.[317] As of January 2023, the Army had received 38 JAGUAR armored reconnaissance and combat vehicles and 452 GRIFFON multi-role armored vehicles since 2019.[318] In December 2022, the Army ordered 50 upgraded Leclerc tanks, 18 of which are set to be delivered in 2023.[319] The upgrade includes a new fire control system as well as "enhanced protection against mines and rockets" and "a 7.62-millimeter remotely-operated turret to support urban combat."[320]

France plans to invest €58 million in the Main Ground Combat System, a next-generation tank that is being developed jointly with Germany.[321] The program, however, remains stuck in study and design, a sluggish start that the French Armed Forces Minister, in February 2023 testimony before a committee of the French Senate, "appeared to attribute...largely to discord between the ambitions of the German government and its industry vendors as well as industry infighting."[322]

One major project is an upgrade to the French sea-based and air-based nuclear deterrent. The French military procurement agency 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.[323]

France's sea-based deterrent is provided by four *Le Triomphant*–class ballistic missile submarines.[324] In March 2022, in response to Russian aggression and threats, France reportedly had three of its four ballistic missile submarines at sea at the same time—something that has not happened in decades. Similar messaging was behind the successful test of the ASMP-A air-launched nuclear weapon in March 2022.[325]

The government launched France'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 after that. Former Armed Forces Minister 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."[326]

Other major naval procurements include $1.09 billion through 2025 for the design phase of a new nuclear-powered aircraft carrier (a model of which was unveiled in October 2022) that will deploy 32 Future Combat Aircraft Systems and is planned to enter service in 2038.[327] In December 2021, the U.S. Department of State's Defense Security Cooperation Agency (DSCA) cleared a potential $1.3 billion sale to France of an Electromagnetic Aircraft Launch System (EMALS), an Advanced Arresting Gear (AAG) system, and related equipment for its new carrier, which will incorporate two or three relatively new electromagnetic catapult systems. According to the DSCA, "[t]he proposed sale will result in continuation of interoperability between the United States and France."[328] In August 2022, the U.S. Department of Defense (DOD) awarded a contract for the development of EMALS and AAG for the French carrier.[329]

The *Suffren*, the first of six new fifth-generation *Barracuda*–class nuclear-powered attack submarines, was commissioned in November 2020.[330] The second, the *Duguay-Trouin*, began sea trials in March 2023.[331] The remaining four, the *Tourville*, *De Grasse*, *Rubis*, and *Casabianca*, "are scheduled for delivery no later than 2030."[332]

France is procuring five defense and intervention frigates, the first of which is due in 2024 and the second and third of which are due in 2025.[333] In November 2022, the French Navy took delivery of the FREMM multi-mission frigate *Lorraine*, the last of eight FREMMs procured.[334] The final two have enhanced air defense capabilities in addition to the focus on anti-submarine warfare that characterizes the six that were delivered between 2012 and 2019.[335]

In November 2020, France announced the overhaul of its mine countermeasures systems by 2029.[336] In the same month, France and the U.K. signed a production contract for the joint Système de lutte anti-mines futur (SLAM-F) program, known in the U.K. as the Maritime Mine Counter Measures (MMCM) system, which "combines

unmanned underwater and surface vehicles and should enable sailors to operate outside of the mine field."[337] Identical unmanned mine-hunting demonstrators were delivered to France and the U.K. in December 2021.[338] The SLAM program's first mine warfare drones are expected in 2023.[339]

In December 2016, France opened a cyber-operational command.[340] In April 2023, the Ministry of Defense announced that among the planned investments in the government's proposed 2024–2030 military programing law is "€4 billion for cyber defense." Other plans outlined in the latest LPM include "€16 billion for munitions, including the modernization of long-range anti-ship missiles, as well as F321 heavy torpedoes and new surface-to-air and air-to-air interceptors (MBDA's Aster-MICA and METEOR families, respectively);" "€10 billion for innovative technology investments, to include directed energy technology, swarming drones, and robotic capabilities;" and "€6 billion for the space domain."[341]

France, which has NATO's third-largest complement of active-duty personnel,[342] withdrew the last of its troops from Afghanistan at the end of 2014, although all of its combat troops had left in 2012. France continues to remain engaged in the fight against the Islamic State, deploying 600 troops in Operation Chammal.[343] In February 2022, the *Charles de Gaulle* Carrier Strike Group undertook a three-month operational deployment to the Mediterranean that included support for Operation Chammal. During the deployment, the CSG took part in "'tri carrier operations' with the Italian Navy...Cavour CSG and the U.S. Navy's Truman CSG" to "maintain interoperability between allied navies, and train with new assets such as Italian F-35Bs, and American E-2D Advanced Hawkeye aircraft."[344]

In November 2022, the CSG left France again for a deployment to the Mediterranean and Indian Ocean in Mission Antares. "During the Mediterranean phase of the deployment, the Charles De Gaulle CSG included U.S. Navy destroyer USS *Arleigh Burke* (DDG-51), Italian Navy frigate ITS *Virginio Fasan* (F 591) and the Hellenic Navy frigate HS *Adrias* (F459)." In January 2023, the *Charles de Gaulle* and a French Maritime Patrol Aircraft took part in bilateral exercises with the Indian Navy off the western Indian coast. Simultaneously, a French A330 MRTT and three Rafales deployed to a Singaporean air force base for exercises.[345]

France's contributions to NATO deterrence missions in Eastern Europe include the deployment of approximately 219 soldiers to Estonia as part of NATO's Enhanced Forward Presence.[346] France also has deployed 500 troops and an air defense system to Romania where it serves as framework nation for one of NATO's battlegroups.[347] France has taken part in Baltic Air Policing 10 times, most recently with four French Rafale jets flying out of Lithuania from December 2022 to March 2023.[348] French fighters continue to fly air patrol missions over Bulgaria, Croatia, Poland, and Romania from bases in France as part of NATO's "enhanced Vigilance Activities [eVA]."[349]

France, which NATO reported in March 2022 was leading "this year's highest-readiness element of the NRF, a multinational force comprised of up to 40,000 land, air, maritime and special operations personnel that NATO can deploy at short notice as needed,"[350] is preparing for high-intensity warfare. In February 2023, it launched ORION (Operations for a Resilient, Integrating, high-intensity Oriented and New Army) 23, "France's biggest war games in decades," which involved 12,000 troops from allied nations, including 7,000 French troops, as well as "naval and land vehicles, aircraft and an aircraft carrier." There was a clear emphasis on large-scale conflict including amphibious landings. "Such preparation is absolutely essential," explained General Vincent Desportes, "and I hope that it will be reproduced in the future so that we regain the know-how of managing large, joint forces that we lost because we have been focused on narrow operations in small spaces with relatively limited means for the past two decades."[351]

On February 17, 2022, President Macron announced that France would "begin a military withdrawal [of its 2,400 troops] from Mali after more than nine years fighting a jihadist insurgency" and that "[t]he heart of this military operation will no longer be in Mali but in Niger...and perhaps in a more balanced way across all the countries of the region which want this [help]."[352] France has reduced its force in the Sahel region from 4,300 to 3,000 troops in Chad and Niger and has 1,500 troops stationed in Djibouti, 900 in Côte d'Ivoire, 350 in Gabon, and 400 in Senegal.[353] It also has 700 troops stationed in the United Arab Emirates,[354] and a 15-year defense agreement between the two countries has been in effect since 2012.

In the Mediterranean, French Rear Admiral Jean J. de Muizon is Deputy Operation Commander of the EU-led Operation Irini, which is charged principally with enforcing a U.N. arms embargo on Libya.[355] France also conducts occasional freedom-of-navigation operations in the Pacific. In April 2023, it reportedly conducted a freedom-of-navigation operation through the Taiwan Strait, most likely with the Frigate *FS Prairial*.[356]

France is keenly aware of and concerned about Chinese activity in the Pacific. In June 2021, French Admiral Pierre Vandier said that France faced "a logic of suffocation" in the region because of China's activities:

> We have a lot of evidence showing a change in posture. Our boats are systematically followed, sometimes forced to maneuver in front of Chinese ships to avoid a collision, in defiance of the rules of freedom of navigation that we defend. Some of our stopovers in countries in the region where we used to pass are canceled at the last moment, without clear explanations.[357]

The French-led, Abu Dhabi–based Awareness Strait of Hormuz initiative to help patrol the waters near Iran became operational on February 25, 2020. France continues to contribute to the initiative's military mission, Operation Agenor.[358]

At 10,000 soldiers, Operation Sentinelle, launched in January 2015 to protect the country from terrorist attacks, is the largest operational commitment of French forces.[359] A 2021 RAND Corporation study found that French forces were highly capable but struggled with readiness, which would become increasingly apparent in large-scale conflict: "[T]he French armed forces lack depth, meaning that demanding operations would quickly exhaust both France's human and material resources."[360] Operation Sentinelle has been a significant burden on French forces since its inception. With the military slated to assist in securing the 2024 Paris Olympics, military leaders worry that any additional tasks levied as the games approach will further strain resources.[361]

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 this relationship unique.

In 2022, the U.K. spent 2.16 percent of GDP on defense and 28.1 percent of its defense budget on equipment, meeting both NATO benchmarks.[362] On March 15, 2023, Chancellor of the Exchequer Jeremy Hunt announced that "we will add a total of £11 billion to our defense budget over the next five years and it will be nearly 2.25% of GDP by 2025." On March 13, the government had announced a £5 billion increase that "over the next two years would be spent on Britain's nuclear submarine building and support activities and replenishing missile and munition stocks depleted by the supply of weapons to Ukraine." Two days later, the Treasury announced the addition of another £6 billion, to be "equally split across the final three years of a five-year period starting 2023/24."[363]

The U.K., which will spend around £48 billion on defense in 2023, remains committed to raising defense spending to 2.5 percent of GDP but without a fixed target date.[364] 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.[365]

In March 2023, the government released its *Integrated Review Refresh 2023* (IR23),[366] updating *Global Britain in a Competitive Age*, which had been published in 2021.[367] Then, in July, the government released *Defence's Response to a More Contested and Volatile World*,[368] updating its 2021 Defense Command Paper.[369]

IR23 argues that a refresh was necessary in part because "the transition into a multipolar, fragmented and contested world has happened more quickly and definitively than anticipated."[370] It further states that "the government's overarching assessment is that the broad direction set by IR2021 was right, but that further investment and a greater proportion of national resource will be needed in defence and national security—now and in the future—to deliver its objectives."[371]

The "Ministerial Foreword" to the Defence Ministry's 2023 Command Paper states frankly that there are "no new commitments on platforms at all—because on that we stand by what we published in 2021. Instead, we focus on how to drive the lessons of Ukraine into our core business and to recover the warfighting resilience needed to generate credible conventional deterrence."[372]

> The return of major war to the continent of Europe—alongside growing threats elsewhere in the world—means we need to sharpen our approach. We need to ensure our warfighting capabilities are robust and credible to be able to deter threats from manifesting in the first place, but also to fight and win if they do. We need to be able to defend the homeland and make ourselves more resilient to all types of shocks. We need to be able to sustain operations today—with sufficient stockpiles of munitions, and critical enablers—as well as investing now in the battle-winning capabilities of the future. We must address increasingly complex and diverse threats, by maximising our own growing but ultimately finite resources, which necessitates ruthless prioritisation and improved productivity.[373]

The Command Paper specifies a notable change in emphasis "From Platform-centric to Technology-centric." Specifically:

> We must…think differently about the Armed Forces themselves. To stay at the cutting edge, we need to move decisively away from a platform-centric approach in favour of a focus on the military effects we are seeking to achieve. Through a technology-centric approach we will achieve an acceleration in battlefield decision making, greater mass, increased productivity in the force and, most importantly, significantly more lethality.
>
> In those areas where we do continue to require platforms, we will increasingly procure based on a clear technology strategy, driving more innovative and future-proofed solutions. We will prioritise the ability to upgrade and evolve through-life rather than see platforms that were highly integrated at the point of design becoming technologically obsolete whilst still relatively new from an automotive perspective. We will typically achieve this through open architectures, rapid software updates, and hardware modularity. Across major programmes, we will ensure much stronger technological feasibility and deliverability assessments within our scrutiny and approvals processes.[374]

Additionally:

> The operational productivity of the force—**ensuring greater levels of lethality and readiness**—is essential given the threats we face. As well as exploiting new technology to this end, we have established a dedicated programme to **increase our operational productivity** across the enterprise, focusing on increasing the readiness of our assets. Defence is already well set, with access to some of the very best military capabilities that exist. However, our studies have shown that we can get more out of them by rebalancing investment in their availability and Next Generation Protector RG Mk 1 UAV will offer increased sustainment. In the first wave of projects, we are focused on maximising the return on our investment in the new Type 31 frigate, our Typhoon aircraft and our Challenger 2 tanks—as well as setting ourselves up for bringing Challenger 3 into service.[375]

The U.K.'s *Defence Equipment Plan 2022–2032* details spending of £242 billion (approximately $298 billion) across 10 years.[376] Navy Command will receive £41.1 billion; Army Command, £40.6 billion; Air Command, £35.1 billion; Strategic Command, £36.3 billion; the Defence Nuclear Organisation, £59.7 billion; and the combined Strategic and Combat Air Programmes, £23.7 billion.[377] The MOD estimates total costs across the decade at £240 billion, therefore allowing £2.6 billion in "headroom."[378]

According to the National Audit Office:

> The Department (MOD) has assessed that the Plan is affordable over the period 2022–2032. This is based on financial data from March 2022 and reflects ongoing improvements to its affordability assessment. However, its assessment continues to be based on optimistic assumptions that it will achieve all planned savings. It will also take some important decisions that affect the Plan's costs in the next financial planning round. While the Plan continues to serve a useful purpose in reporting to Parliament on planned expenditure, the volatile external environment means this year's Plan is already out of date.[379]

Although the number of its active-duty servicemembers is small in comparison to the militaries of France and Germany, the U.K. maintains one of NATO's most effective armed forces, but underinvestment, particularly in land forces, has eroded these capabilities. In January 2023, a senior U.S. general reportedly told U.K. Defence Secretary Ben Wallace that "the British Army is no longer regarded as a top-level fighting force."[380]

The Army's Future Soldier plan, published in November 2021, "aims to achieve the most 'radical transformation' of the British Army in 20 years by delivering a fully modernized warfighting division by 2030, largely dependent on entry to service of Challenger 3 main battle tanks, Ajax armored fighting vehicles and Boxer wheeled, armored personnel carriers." However, there is concern that "the recent acquisition record of the service, beset by gross overspending, program cancellations, industrial disputes and equipment not entering service in line with original timeline projections, puts the 2030 target in jeopardy."[381] The plan envisions reducing the regular Army from 77,000 to 73,000 by 2025, but Wallace has been quoted as saying, "I've always said as the threat changes, so must the size of everything, and I still stick to that."[382]

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."[383] In April 2019, the U.K. reported that it was planning to upgrade only 148 of its 227 remaining Challenger IIs, cutting its fleet by one-third.[384] The 79 other tanks would be scavenged for spare parts.[385] Defence Secretary Wallace has stated that more tanks will be modernized in light of Russia's war in Ukraine, but exactly how many additional tanks will be upgraded is unclear.[386] Because Challengers are not currently manufactured, sourcing spare parts is a major problem.[387]

The 2021 Defence Command Paper laid out plans to spend £1.3 billion on upgrades to "148 of our main battle tanks to ensure the Challenger III will become one of the most protected and most lethal in Europe."[388] The Challenger III's upgrade is to include "active protection systems, improved sensors and optics, and a new turret."[389] Production of the Challenger IIIs began in March 2022, and initial operating capability is expected in 2027.[390] The tank will remain in service "until at least 2040."[391] Of the 227 Challenger IIs in the Army's current inventory, only 157 could undertake operations within 30 days.[392] One former tank officer has observed that because of the small number of tanks available to the U.K., its "armoured brigades can only play a bit part in someone else's military in alliance or coalition."[393]

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.[394] In 2019, the U.K. signed a £2.8 billion deal to procure 523 Boxer armored vehicles.[395] As a result of the decision to stop upgrading the heavier Warriors, "Defence is considering further Boxer fleet enhancements, uplifts, and potential new variants for a number of programmes for capability coherence in the Brigade Combat Teams, Land Industrial Strategy opportunity, and longer-term strategic planning."[396] In 2022, the Army signed a contract extension for 100 additional Boxers (for a total of 623) with the first units expected to enter service in 2023.[397] The Ajax infantry fighting vehicle platform has begun to move again after an eight-year delay. The first squadron will receive the Ajax by the end of 2025, but vehicles will not obtain full operating capability until 2028 or later.[398]

As of March 2023, the U.K. had taken delivery of 30 of 48 F-35Bs ordered with delivery of seven more possible by the end of the year and 11 more to be delivered across 2024 and 2025.[399] Although the total number of F-35s that will be procured may not be known until "the 2025 time frame,"[400] the 2021 Defence Command Paper states an ambition to "grow the [F-35] Force, increasing the fleet size beyond the 48 aircraft that we have already ordered."[401] In December 2022, the MOD reiterated its commitment to procuring a total of 138 F-35s.[402]

In 2019, the U.K. took delivery of the last of 160 Typhoon aircraft, all of which are expected to stay in service until 2040.[403] In January 2023, BAE Systems told Parliament that upgrading the U.K.'s remaining 30 Tranche 1 Typhoons to bring them "up to a standard where they could be retained in service rather than retired in 2025, as currently planned," is "technically feasible." The planes "have an average of 60% of their airframe fatigue lives remaining" but are slated to be retired in 2025.[404]

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.[405] In 2021, the U.K. detailed a £2 billion investment over the next four years to develop the Tempest, a sixth-generation fighter to be delivered in 2035, in partnership with Italy, Japan, and Sweden.[406] In December 2022, the U.K., Italy, and Japan announced an agreement to cooperate on development of a sixth-generation fighter aircraft under the Global Combat Air Programme, which would essentially merge the Tempest effort with Japan's F-X program.[407]

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 seen service in Mali, Nigeria, and Iraq and is now part of the RAF fleet.[408]

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. It has taken delivery of 21 of 22 A400M heavy transport aircraft ordered and plans to procure six more by 2030.[409] The U.K. has retired four of 14 C-130Js with the remainder to be retired in 2023 rather than 2025. The decision to retire the C-130J—an aircraft favored by special forces—12 years ahead of schedule has drawn criticism from some lawmakers and military personnel. RAF Deputy Commander Capability Air Marshal Richard Knighton testified in February 2023 that "[t]here are a small number of niche capabilities that the C-130J has that will not be transferred across to the A400M program at the point in which the C-130 is retired in the summer [of 2023]." Whether the A400M has the ability to take on these niche capabilities, which include the need for longer runways, remains a matter of concern.

The Sentinel R1, an airborne battlefield and ground surveillance aircraft, flew its last operational flight in February 2021.[410] In January 2021, "[t]he ninth and final Poseidon maritime patrol aircraft—ZP809—[was] delivered to RAF Lossiemouth in Scotland."[411] 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."[412] The P-8s are expected to obtain full operating capability at the end of 2024.[413]

The U.K. is replacing its MQ-9A reaper fleet with 17 MQ-9B "protector" drones.[414] The MQ-9Bs were slated to enter service by 2018 but were delayed by budgetary issues;[415] the U.K. accepted the first in October 2022.[416] The U.K. also plans to procure approximately 44 medium helicopters (a $1.15 billion program) that will enter service in 2025 and remain in service until the mid-2040s. This platform will replace four different helicopter platforms currently in service.[417]

The Royal Navy has lost 40 percent of its fleet since the end of the Cold War.[418] Of the 55 ships lost since the early 1980s, half are frigates, and the U.K. now operates only 12.[419] Overall:

> Budget cuts have delayed crucial procurement programmes. The Type 23 frigates and Trafalgar class submarines should have been replaced years ago, and it is becoming increasingly challenging and expensive to maintain aging vessels. The Navy has also taken too long to rectify major problems with vessels. One notable example is the issue with the Type 45 destroyers' propulsion system: the six vessels are not scheduled to be fixed until 2028, and there are already signs that this target may be slipping. As a result of these failures too many of our high-end warships spend too much of their time unavailable for operations.[420]

As construction of destroyers and frigates picks up steam, "the ambition is to rebuild to more than 20 by the end of the decade."[421] However:

> The mid-2020s will be a period when the [Royal Navy] must endure an unavoidable low point in strength before it recovers in the early 2030s. There are three main factors that drive this, two of them rather beyond the RN's immediate control. Firstly the backbone of the surface fleet, the Type 23s, are getting older and fewer in number. Secondly, the carrier strike project is some way from reaching its full potential mainly due to the slow delivery of F-35s, a constrained pilot training pipeline and obstacles to the integration of key air weapons. Finally, ship numbers are declining while the RN transitions to autonomous systems that are not yet fully mature or proven on operations.[422]

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, the first of which is "expected to enter service in the mid-2020s."[423] The Type-26 Global Combat Ships are meant to handle a flexible range of tasks; weaponry will include "the Sea Ceptor missile defence system, a 5-inch medium calibre gun, flexible mission bay, Artisan 997 Medium Range Radar, and towed array sonars" as well as "the Future Cruise/Anti-Ship Weapon (FCASW) from 2028."[424] In September 2021, construction began on the HMS *Venturer*, the first of five T31e frigates that are scheduled for delivery by 2028.[425] One of the U.K.'s oldest Type-23 frigates, HMS *Monmouth*, was retired early at the end of 2021, and a second, HMS *Montrose*, was retired in March 2023, bringing the U.K.'s frigate fleet down to 11.[426] The projected savings of £100 million ($133 million) "will be invested into the development of the follow-on capabilities of the Type 26 anti-submarine warfare frigate and Type 31 general purpose frigate."[427]

From May 2021–December 2021, the HMS *Queen Elizabeth* conducted its first operational deployment, which included time in the Mediterranean Sea and the Indian and Pacific Oceans "working alongside ships from 17 countries and participating in 18 major exercises."[428] The Carrier Strike Group deployment included a U.S. destroyer and a Dutch frigate, and "[t]he F35B contingent aboard HMS Queen Elizabeth undertook 1,278 sorties...with more than 2,200 hours of flying, including 44 combat missions in support of Operation Inherent Resolve against the Islamic State (ISIS) in Iraq and Syria."[429] In November, the Carrier Strike Group took part in interoperability exercises with Italian F-35Bs.

According to Commodore Steve Moorhouse, commander of the U.K. Carrier Strike Group, "[t]he fact that US, Italian, and UK F-35Bs are able to fly to and from one another's decks offers tactical agility and strategic advantage to NATO."[430] International Institute for Strategic Studies (IISS) Senior Fellow for Naval Forces and Maritime Security Nick Childs noted that "[f]or the Royal Navy, this was in part a relearning of the lessons of large-scale carrier deployments after a decade-long gap in its operational carrier capability." Additionally:

> A significant part of this will have been the exercises with multiple US carriers and aviation-capable amphibious ships to calibrate the added value of a UK carrier, and perhaps also to test how best to mitigate the relatively low endurance of the F-35B, particularly as far as the potential operational challenges in the Indo-Pacific theatre are concerned.[431]

The U.K.'s *Queen Elizabeth*–class carriers are the largest operated in Europe. A second, HMS *Prince of Wales*, was commissioned in December 2019.[432] A series of leaks that cost £3.3 million to correct caused the cancellation of planned fixed-wing sea trials with F-35s off the U.S. east coast that were scheduled for January 2021; the *Prince of Wales* returned to the sea in May 2021 after five months of repairs.[433] In September 2022, Forces.net reported that the *Queen Elizabeth* "can carry up to 72 aircraft, with a maximum capacity of 36 F-35B fighter jets" but that "[i]t is more likely the Queen Elizabeth–class carriers will have up to 24 Lightning jets on board for operations."[434]

In March 2022, the *Prince of Wales* led NATO's Maritime High Readiness Force, serving as command ship for Exercise Cold Response in which 35,000 troops from 28 nations converged in Norway and the surrounding seas through April for cold-weather exercises.[435] In August 2022, the carrier was forced to leave exercises with the U.S. early after breaking down off the southern U.K. coast.[436] It arrived in drydock for repairs in October 2022. Repair costs have soared from an estimated £3 million to £20 million, but a spokesman for the Royal Navy has said that "[w]e expect HMS *Prince of Wales* to commence her operational program as planned, in autumn 2023."[437]

The Royal Navy is also introducing seven *Astute*–class attack submarines (SSNs) as it phases out its older *Trafalgar*–class subs. The fifth *Astute*–class submarine, *HMS Anson*, was launched in April 2021.[438] In March, the U.S., the U.K., and Australia announced that Australia's SSN "will be based upon the United Kingdom's next-generation SSN design while incorporating cutting edge U.S. submarine technologies, and will be built and deployed by both Australia and the United Kingdom."[439] Reflecting its close ties with Australia, the U.K. "agreed to provide training to Royal Australian Navy submariners alongside Royal Navy crews on board the HMS Anson in September 2022."[440]

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.[441] In February 2022, the U.K. ordered a fifth ATLAS Remote Combined Influence Minesweeping System.[442] A newly purchased "mother ship to launch drones to find and destroy undersea threats" was "intended to enter service in Spring 2023."[443]

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.'s 2021 Integrated Review announced plans to raise the ceiling on the nation's nuclear warhead stockpile to "no more than 260 warheads" because of "the developing range of technological and doctrinal threats."[444] In November 2022, the U.S. Navy published "an exceptionally rare picture showing the *Ohio*–class ballistic missile submarine USS *Tennessee*, sailing on the surface alongside an unnamed British *Vanguard* class ballistic missile submarine somewhere in the Atlantic Ocean." *Vanguard* subs "regularly travel to the U.S. Navy's ranges in the Atlantic off Florida for training and other purposes, including to conduct routine test launches of Trident D5 missiles."[445]

The U.K. is procuring four new *Dreadnought*–class ballistic missile submarines—HMS *Dreadnought*, HMS *Valiant*, HMS *Warspite*, and HMS *George VI*—at a cost of "£31bn (USD42bn) with a further contingency of £10bn (USD13.6bn).[446] The first, HMS *Dreadnought*, "is expected to enter service in the 2030s with a service life of a minimum of 30 years." Construction of HMS *Dreadnought* began in October 2016, "[t]he keel for Valiant was laid in 2019," and "[t]he steel-cutting ceremony for Warspite was held...in February 2023."[447] 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.[448]

Despite these issues, the U.K. remains a leader in NATO, serving as the framework nation for NATO's EFP in Estonia and a contributing nation for the U.S.-led EFP in Poland with 140 troops.[449] In February 2022, the U.K. announced that it was doubling its troop presence in Estonia by deploying an additional battlegroup, swelling the U.K. contribution to more than 1,700 troops along with 48 Warrior Infantry Fighting Vehicles and 24 Challenger II main battle tanks.[450] However, the second battlegroup returned to the U.K. in December 2022 and was not replaced this year. Instead, "the UK will hold at high readiness the 'balance of a Brigade' in the UK, available to deploy if needed" and "will also 'surge' forces throughout the year for exercises, enhance its headquarters and provide support to Estonian armed forces."[451]

In December 2021, the U.K. deployed 140 armed forces engineers to Poland "to provide support at [Poland's] border with Belarus, where the West says Minsk is orchestrating an ongoing migrant crisis."[452] In February 2022, it sent 350 Marines "to support the Polish Armed Forces with joint exercises, contingency planning and capacity building in the face of ongoing tensions on the Ukrainian border. This support is being offered on a bilateral basis and is not part of the UK's offer to NATO."[453] The U.K. is committed to leading NATO's VJTF in 2024. The VJTF's "leadership position is rotated among members to share the burden that it places on the military, and brigades are bound to the VJTF for three years to help with the stand-up, stand-by and stand-down phases, meaning they are not available for other missions or international obligations."[454]

The Royal Air Force has taken part in Baltic Air Policing seven times since 2004, most recently beginning in March 2023.[455] In March 2022, four RAF Typhoons were deployed to Romania to take part in NATO's enhanced Air Policing, the fourth time the RAF has participated in eAP since 2017.[456] That same month, the RAF announced that F-35s flying from RAF Marham were taking part in patrols of Polish and Romanian airspace as part of NATO's enhanced Vigilance Activity.[457] From November 2019–December 2019, four U.K. typhoons and 120 personnel took part in Icelandic Air Policing.[458]

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.[459] It also contributes to NATO's Kosovo Force;[460] is an active part of the anti-ISIS coalition "as part of Operation Shader, the UK's military contribution to the destruction of Daesh which has been running since 2014";[461] and has 100 soldiers engaged in training Iraqi security forces.[462]

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 military[463] and one of its more capable (a relative measure) despite continued lackluster defense investment. In 2022, Italy spent 1.51 percent of its GDP on defense and 22.69 percent of its defense budget on equipment, meeting the second NATO spending benchmark.[464] Current Prime Minister Giorgia Meloni "has vowed to drop Italy's traditional reticence about discussing defense spending and boost budgets" because "[f]reedom has a price and if you are not able to defend yourself, someone else will do it for you, but will not do it for free. They will impose their interests, even if they differ from yours, and I don't think this was ever good business for anyone."[465] The new government raised the defense procurement budget from €7.85 billion to €8.25 billion.[466] The Defense Ministry's planning document for 2022–2024, released in July 2022, "anticipates that Rome will reach the current NATO average of 1.64 percent by 2024, inflation permitting."[467]

Italy spends the alliance's second-highest total on salaries (62 percent of its defense budget),[468] "leaving proportionally less cash for military procurement, training, maintenance and infrastructure."[469] It has been noted that "[h]igh personnel expenditure is partly linked to the limited generational change within the armed forces. In 2020, for instance, the average age in the Italian Army was 38 and 44 for the air force. By contrast, the average age is 31 in the U.K. military and 33 in both France's armed forces and the Bundeswehr's."[470]

Recruitment difficulties have led to personnel shortages, particularly in the Navy, a service that also suffers from "a shortage of vessels" and "capability gaps in key areas such as anti-submarine warfare and land-attack missiles."[471] For instance, "Navy chief Adm. Enrico Credendino told lawmakers his force lacked drones and submarine-spotting aircraft, complaining that 'When we need one we ask the U.S. to use one of those it has stationed at Sigonella,'" and that "Italian naval performance was hampered by a lack of personnel, claiming that while France provided each of its FREMM frigates with two rotating crews, 'We cannot guarantee one full crew for any of our FREMMs.'"[472]

Key naval procurements include plans for four U212A submarines, the first of which is scheduled for delivery in May 2030; a "Special Diving Operations–Submarine Rescue Ship (SDO–SuRS)"; and the Teseo Mk2/E anti-ship missile, which is in development.[473] The U212A project passed a design review in March that "validates the final design of the underwater vessel, demonstrating that it is mature and fully compliant with specific mission requirements."[474]

Italy launched the last of 10 new FREMM frigates in January 2020. Its Landing Helicopter Dock (LHD) Trieste is expected to be delivered this year and "although classified as an LHD...will effectively be Italy's second aircraft carrier, featuring a ski jump that allows the ship to operate the Lockheed Martin F-35B."[475]

The Italian Navy is planning major capabilities expansions that include:

> 7 PPA medium frigates of the Thaon di Revel class, 8 corvettes of 3000 tons from the European Patron Corvette program, 4 Offshore Patron Vessel of 1500 tons of the Comandanti class, 10 mine warfare ships, as well as 3 large logistics ships of the Vulcano and Etna classes. In addition, it will have 8 to 12 Type 212 anaerobic conventionally powered submarines, and 4 destroyers, two of the 7000-ton Horizon class already in service, identical to the 2 French Forbin–class anti-aircraft defense frigates, and especially two new heavy destroyers over 10.000 tons which will replace the two Durand de la Penne anti-aircraft destroyers.[476]

Scheduled to be delivered by 2028, the DXX destroyers, "[w]ith a length of 175 meters, and a displacement of nearly 11.000 tons...will be the largest surface combatants built in Europe."[477]

Air Force procurements include (among others) T-345 and T-346 jet trainers; three MC-27J Praetorians for support of special forces; and three EC-27J JEDI (Jamming and Electronic Defense Instrumentation) electronic warfare aircraft with capabilities that "are intended for the execution of convoy escort missions where it provides from the air an electromagnetic safety bubble."[478] In November 2022, Italy announced a €1.12 billion program to purchase six new KC-767B/KC-46A tankers to replace its KC-767A fleet beginning in 2023 and continuing through 2035.[479]

As of March 2023, Italy had received 17 F-35As and six F-35Bs "of the 90 aircraft currently on

order," with the last to be delivered by 2030.[480] Italian Air Force Chief of Staff General Luca Goretti has urged a return to the initial purchase number of 131, which "was cut [in 2012] by 30 percent, from 131 to 90 'as a consequence of the general economic situation, rather than as a result of scientific military analysis.'"[481] A government-owned plant for final assembly of the F-35 is located in Cameri, Italy. Italy now operates two bases with F-35s: Amendola, north of Bari along the Adriatic, and Ghedi in northern Italy outside Milan.[482]

Italy will continue funding for development of the Eurodrone in conjunction with France, Germany, and Spain. It also "plans to arm its MQ-9 Reaper drones with upgrades from the United States" and reportedly has expressed interested in acquiring Turkish-made drones for surveillance.[483]

In December 2020, Italy signed the Future Combat Air System (FCAS) Cooperation agreement with Sweden and the U.K. The agreement covers "cooperation for research, development, and 'joint-concepting' of the Tempest fighter which will eventually replace the Eurofighter Typhoon fighter jets in Italy and the UK, and the Saab Gripen fighter jets in Sweden."[484] In December 2022, Japan announced "that it will jointly develop its next-generation fighter jet with the U.K. and Italy as it looks to expand defense cooperation beyond its traditional ally, the United States."[485] In March 2023, the leaders of Italy, Japan, and the U.K. "confirmed their commitment to achieve the fighter jet deployment by 2025."[486]

Key Army procurements include the planned acquisition of 150 Centauro II tank destroyers, 650 Lince 2 light multi-role vehicles, VBM Freccia 8x8 infantry combat vehicles, and upgrades to the Ariete main battle tank (MBT). The Army plans to upgrade 125 Ariete MBTs, extending their operational timeline to 2040, but analysts have noted that not enough money has been allocated to upgrade all 125. Because of inadequate funding, other non-priority Army acquisition projects are not likely to come into service until the end of the decade.[487] The Army began trials of the upgraded Ariete MBT in July 2022.[488] However, despite these planned upgrades, Italian defense planners reportedly "envisage a current need for 250 main battle tanks, of which 125 could be upgraded Ariete tanks, leaving a need for 125 gap fillers."[489]

Italy's focus is the Mediterranean region where it participates in a number of stabilization missions including NATO's Sea Guardian, the EU's Operation Irini and Operation Atalanta, and the Italian Navy's own Operation Mare Sicuro (Safe Sea) off the Libyan coast.[490] Additionally, 400 Italian troops are deployed to Libya as part of the Assistance and Support Bilateral Mission in Libya (MIASIT).[491]

Italy also contributes to Standing NATO Maritime Group Two and Standing NATO Mine Countermeasures Group Two;[492] NATO battlegroups in Bulgaria, where Italy is the framework nation (750 troops), Hungary (250 troops), and Latvia (260 troops); and Operation Prima Parthica in Iraq and Kuwait (650 troops, partly to help train Iraqi Security Forces).[493] Italian air assets including Tornado jets operating out of the Ahmed Al Jaber air base in Kuwait are performing reconnaissance missions in support of the coalition to defeat the Islamic State.[494] With 564 troops, Italy was the third-largest contributor to KFOR, behind the United States (768) and Germany (743), as of April 2023.[495] In March 2022, it was reported that Italy intended to send two mine countermeasures vessels to Romania "to assist with the recently found drifting sea mine threat."[496]

Since 2015, "Italian jets...have regularly deployed to support NATO's Baltic Air Policing mission out of Lithuania and Estonia," and in August 2022, "Italian Air Force Eurofighters officially took up the mission of safeguarding NATO's skies above the Baltic region flying out of Malbork, Poland."[497] From December 2022–July 2023, the Air Force once again took part in NATO's enhanced Air Policing in Romania with four Typhoons,[498] and from April–July 2022, four F-35As and 130 troops were deployed to Iceland.[499]

Poland. Situated in the center of Europe, Poland shares a border with four NATO allies, a long border with Belarus and Ukraine, and a 130-mile border with Russia's Kaliningrad Oblast, a Russian enclave between Poland and Lithuania on the Baltic Sea that Poland is trying to secure against Russian-facilitated illegal border crossings by building a "temporary barrier."[500] Poland also has a 65-mile border with Lithuania, the only land connection linking NATO's Baltic members with any other NATO member. NATO's contingency plans for liberating the Baltic States in the event of a Russian invasion reportedly rely heavily on Polish troops and ports.[501]

Poland is ground zero for supplies and military equipment from Western allies reaching Ukraine.

Currently, "as many as 10 Boeing 747 jumbo jets carrying cargo land and take off during a single day, on top of regular commercial traffic" at the Rzeszow airport in the country's East. The city may have 30,000 more residents than it had before Russia's full-scale invasion of Ukraine began, and the U.S. has deployed Patriot missile batteries at the airport, underscoring its importance.[502]

Poland has an active military force of 114,050 that includes a 58,500-person army with 647 MBTs.[503] It also has a Territorial Defense Force (TDF) that, according to former Minister of Defense Antoni Macierewicz, is intended "to increase the strength of the armed forces and the defense capabilities of the country" and is "the best response to the dangers of a hybrid war like the one following Russia's aggression in Ukraine."[504] 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."[505] Its planned 17 brigades will be distributed across the country.[506]

The TDF, which currently numbers 36,000, is planned to reach a minimum strength of 50,000[507] and is "the fifth single service in the Polish Armed Forces next to Land Forces, Air Force, Navy and Special Operations Forces" and "an integral part of Poland's defence and deterrence potential."[508] National Defence Minister Mariusz Blaszczak has stated that during the COVID-19 pandemic, the TDF "impeccably proved their importance and effectiveness."[509] According to Blaszczak, Poland plans to "increas[e] the army's size to at least 300,000 soldiers, supported by a 50,000-strong territorial defence force," and the 13,742 Poles who joined in 2022 constitute "the highest enrolment...since Poland abolished conscription in 2008."[510]

Poland is investing in cyber capabilities. Its new Cyberspace Defense Force was established in February 2022 with a mission of "defense, reconnaissance and, if need be, offensive actions to protect Poland's Armed Forces from cyberattacks."[511] 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. The U.S. further expanded its footprint in 2022 following Russia's second invasion of Ukraine.

In 2022, Poland spent 2.42 percent of GDP on defense and 35.92 percent of its defense budget on equipment, surpassing both NATO benchmarks.[512] Poland's 2020 National Security Strategy accelerated the timeline for spending 2.5 percent of GDP on defense from 2030 to 2024.[513] In January 2023, Prime Minister Mateusz Morawiecki announced that Poland would raise defense spending to 4 percent of GDP in 2023—a "decision, against the background of Russia's war in Ukraine, [that] would see the country spending even more as a proportion of its economy than the United States.."[514]

In October 2022, Poland and the U.K. "signed a series of agreements to move forward on military collaboration, as the Ukraine conflict continues to drive home the necessity of European co-development efforts." The agreements include an Air Defence Complex Weapons Memorandum of Understanding that "enables the UK and Poland to cooperate in the development and manufacture of current and future complex weapons" and approves the creation of a working group to "explore the potential for the UK and Polish Armed Forces to cooperate on the development of a Future Common Missile." The countries also signed a Statement of Intent "to collaborate on the procurement and operation of three Miecznik frigates, which will be a variant of the Arrowhead-140 frigates."[515]

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.[516] Several major acquisitions have been announced in recent years. For example:

- In February 2018, Poland joined an eight-nation "coalition of NATO countries seeking to jointly buy a fleet of maritime surveillance aircraft."[517]

- In March 2018, in the largest procurement contract in its history, Poland signed a $4.75 billion deal for two Patriot missile batteries. The first was delivered in 2022, and delivery of the second is expected in 2023. The batteries are being deployed at Bemowo military airport in Warsaw, and troops are training on the systems, "which are set to achieve operational readiness in 2024."[518] In May 2022, Defense Minister Mariusz Błaszczak announced that Poland had "request[ed] the U.S. government to sell it six Patriot batteries with related gear."[519]

- In February 2019, Poland signed a $414 million deal to purchase 20 high-mobility artillery rocket systems (HIMARS) from the U.S.,[520] and in February 2023, it was reported that "[t]he first HIMARS battalion firing module is set to arrive this year."[521] In May 2022, Defence Minister Blaszczak sent a letter of request to purchase an additional 500 HIMARS systems from the U.S.[522]

- In April 2019, Poland signed a $430 million deal to buy four AW101 helicopters that will provide anti-submarine warfare and search-and-rescue capabilities. Delivery of the first helicopter has been delayed until the second half of 2023.[523]

- In April 2020, it was announced that Poland had concluded negotiations for the purchase of 60 Javelin Command Launch Units (CLUs) and 180 Javelin anti-tank missiles.[524] In January 2023, Poland exercised an option to order an additional 50 CLUs and 500 missiles, deliveries to be completed by 2026.[525] The original FMS contract and the option together are worth $158 million.[526]

- In January 2020, Poland signed a $4.6 billion deal to purchase 32 F-35As, "with initial deliveries beginning in 2024 and in-country deliveries from 2026," to be based at Poland's Lask Air Base. A group of 24 Polish pilots completed F-35 simulator training in Arizona early in 2021.[527] Polish pilots will be the first foreign pilots to train at the newly designated Air Force foreign pilot training center at Ebbing Air National Guard Base in Fort Smith, Arkansas, possibly as early as late 2024.[528]

- In April 2021, the U.S. and Poland signed an agreement for Poland to acquire five retrofitted C-130H Hercules transport aircraft by 2024 with the first arriving in 2021 and the second in 2022.[529]

- In July 2021, Poland announced a deal to procure 250 M1A2 Abrams SEPv3 tanks with deliveries "expected to begin in 2022."[530] In January 2023, Poland signed a $1.4 billion contract to procure an additional "116 M1A1 Abrams tanks with related equipment and logistics starting this year."[531]

- In September 2022, Poland received the first of two Narew short-range air defense system (SHORAD) launchers, originally scheduled for delivery in 2027. The earlier delivery was "prompted by Russia's invasion of Ukraine."[532]

- In September 2022, Poland's Ministry of National Defence sent a letter of request to the U.S. for the purchase of "96 Boeing AH-64E Apache attack helicopters."[533]

- In February 2023, the U.S. State Department approved a $10 billion sale to Poland that "covers 18 M142 High Mobility Artillery Rocket System, or HIMARS, launchers and 468 launcher-loader module kits" in addition to "45 M57 Army Tactical Missile Systems, known as ATACMS, and hundreds of guided multiple launch rocket and warheads variants."[534]

- Poland has signed agreements to purchase 48 Korean Aerospace FA-50 light combat fighter jets, 180 Hyundai Rotem K2 Black Panther Tanks, and 212 Hanwha K9A1 self-propelled artillery from South Korea.[535] Poland plans to acquire "more than 800 of the K2PL variant of the tank, production of which starts in Poland in 2026," and an additional 600 K9 howitzers "with domestic production expected to start in 2026."[536] The first 10 tanks and 24 howitzers were delivered to Poland in December 2022.[537]

Poland's Air Force has taken part in Baltic Air Policing 11 times since 2006, most recently operating four F-16s out of Šiauliai Air Base in Lithuania from October 2022–March 2023.[538] From August–October 2021, four Polish F-16s and 140 troops took part in Icelandic Air Policing, marking the first time that Poland has taken part in that mission.[539]

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.[540] Poland also is part of NATO's EFP in Latvia and Romania[541] and has 230 troops in NATO's KFOR mission in Kosovo.[542] In addition, 150 troops are deployed to Iraq, Jordan, Kuwait, and Qatar as part of Operation

Inherent Resolve, and 30 are deployed as part of NATO Mission Iraq.[543] In 2021, 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.[544]

Turkey. Turkey remains an important U.S. ally and NATO member, but autocratic President Recep Tayyip Erdogan's delays in considering Sweden's NATO membership,[545] Turkey's purchase of S-400 air defense systems from Russia, and Turkey's becoming a haven for illicit Russian money to evade Western sanctions have strained relations. At the same time, Turkey's support for Ukrainian forces has included its February 2022 closure of the Bosphorus and Dardanelles Straits to warships of any nation, thereby hampering the Russian Black Sea Fleet;[546] facilitation of a deal for the safe export of Ukrainian grain via the Black Sea; and providing the Bayraktar TB2 drone that has proven to be so effective on the battlefield.[547] So close has the relationship become that in October 2022, Baykar announced it would complete a production facility for the drone in Ukraine within two years.[548]

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. 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. As of July 2022, 332,884 people had been detained, and the government continues to jail opposition politicians and civil society leaders. The government is also pursuing an ambitious program of prison construction and "is planning to build 20 new prisons [in 2023], which is expected to significantly increase the country's already high incarceration rate."[549]

The post-coup crackdown has had an especially negative effect on the military. At the end of 2021, 24,253 military personnel had been dismissed,[550] and military promotions have been politicized. In the words of one military officer:

> [T]he power in the promotion and appointment of admirals and generals passed from the military bureaucracy to Erdoğan's government. The changes led to the politicization of the military and undermined its independence. The new system favors officers loyal to the Erdoğan government rather than those best qualified and experienced.[551]

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 680 of 1,350 pilots greatly exacerbated existing pilot shortages.[552] In September 2022, it was reported that the "Turkish Ministry of Defence requested that the 15-year limit for mandatory service of pilots be extended to 21, so as to reduce the shortage of combat pilots."[553]

The dilapidated condition of its air force is partly why Turkey has decided to acquire new ground-based air defense systems.[554] In December 2017, Turkey signed a $2.5 billion agreement with Russia to purchase two S-400 air defense systems. Delivery of the first system, consisting of two S-400 batteries and 120 missiles, was completed in September 2019, but delivery of a second system has been delayed by the inability of the two countries to agree on technology transfer and co-production.[555] Russia's full-scale invasion of Ukraine and Turkey's less urgently felt need for air defenses to cover territory in Syria have led some analysts to conclude that a second S-400 system will never be delivered.[556]

As with other defense capabilities, Turkey is working hard to develop an indigenous replacement for the S-400:

> As it drifts from the Russian system, Turkey has been implementing an ambitious plan to locally produce its own missile defense systems. Experts said the short- and medium-range systems have come a long way, and some are operational, though long range air defense systems with capabilities similar to S-400 are still in the testing phase.[557]

In March 2023, the chairman of defense equipment manufacturer Aselsan Elektronik Sanayi echoed this sentiment: "We are making air defense systems. We don't need S-300s, S-400s."[558]

The delivered S-400 system is partly to blame for a souring of relations with the U.S. U.S. officials expressed grave concerns about the 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."[559] In addition, Section 1245 of the FY 2020 National Defense Authorization Act for Fiscal Year 2020 prohibits the transfer of "any F–35 aircraft or related support equipment or parts to Turkey" unless the Secretaries of Defense and State certify that Turkey "no longer possesses the S-400 air and missile defense system or any other equipment, materials, or personnel associated with such system."[560]

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.[561] In December, a U.S. official stated that "[w]e object to Turkey's purchase of the system and are deeply concerned with reports that Turkey is bringing it into operation."[562] That same month, the U.S. decided to impose sanctions that took effect in April 2021.[563] Fearful of the effect of these sanctions, Turkey had been stockpiling spare F-16 parts since 2019.[564] In November 2022, Defense Minister Hulusi Akar stated that S-400 could be deployed if the circumstances warranted: "If any threats arise, we will decide where and how to use it."[565] As of March 2023, despite "some testing," Turkey did "not appear to have made the system generally operational."[566]

Turkish defense firms made "more than 800 components...for the F-35 as part of a nine-nation consortium," and Turkey's suspension from the program may have cost Turkish defense industry as much as $10 billion (excluding indirect costs).[567] (The U.S. Government Accountability Office has specified more precisely that 1,005 parts were produced by Turkish firms.[568]) It took some time for the consortium to move away from Turkish suppliers. As a result, "Turkish suppliers continued to supply F-35 parts to US companies until September 2021. As of September 23, 2021, Turkish defense companies stopped supplying F-35 parts and Turkey was officially removed from the program."[569]

Having been removed from the F-35 program, Turkey is purportedly planning to produce a domestic fifth-generation jet, the TF-X National Combat Aircraft. A prototype was unveiled in early 2023 and may have its maiden flight in 2023 with a goal of entering service in 2030. The TF-X appears possibly to be using engines from a U.S. company, which if true would have required Biden Administration approval.[570]

Turkey has been a key supporter of Ukraine. In addition to Bayraktar armed drones,[571] it supplies "equipment including Kirpi armoured troop carriers and body armour."[572] The first of two Ada–class corvettes being built in Turkey for the Ukrainian Navy was launched at a Turkish shipyard in October 2022,[573] and as noted previously, Turkey's closure of the Bosphorus and Dardanelles straits to warships has blocked Russian warships operating in the Mediterranean from entering the Black Sea to join in the assault on Ukraine.

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 patrolled jointly 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 Bashar al-Assad. Turkish forces opposed the offensive and lost 36 soldiers before Turkey and Russia agreed to a cease-fire. The cease-fire was extended in February 2021 and, despite violations by the Syrian Army and rebel factions, has held because of a détente in Syria between Turkey and Russia. Russia is seeking to craft some sort of agreement between Turkey and Moscow's client regime in Damascus. According to the Congressional Research Service:

> Erdogan has hinted at the possibility of repairing relations with Asad, after more than a decade in which Turkey has sought an end to Asad's rule. As of early 2023, Russia is reportedly trying to broker better ties. Turkey is seeking Syria's help to push YPG fighters farther from the border and facilitate the return of Syrian refugees living in Turkey. Asad reportedly wants full Turkish withdrawal in return. It is unclear whether the two leaders

> can compromise and how that would affect Turkey's relationship with the [Syrian National Army] and the overall dynamic with other stakeholders in northern Syria. In response to a question about potential Turkey-Syria rapprochement, the State Department spokesperson has said that U.S. officials have told allies that now is not the time to normalize or upgrade relations with the Asad regime.[574]

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 an enduring source of friction (perhaps at least partly because Turkey did in fact renege on the agreement in 2020).[575] Turkey and Greece remain at odds over maritime boundaries and drilling rights in the eastern Mediterranean, drilling rights off the Cypriot coast, and migration.[576] Turkey is reportedly planning to build a naval base in the Turkish Republic of Northern Cyprus[577] and began to fly UAVs out of Geçitkale Airport in December 2019.[578] Recent upgrades to the base have further heightened tensions.[579]

In March 2021, Turkey and Qatar signed a deal for Qatari pilots to train in Turkey, leading to speculation that Turkey had "decided to train its fighter pilots on Rafale jets of the Qatar Emiri Air Force (QeAF) so as to counter the Rafale fleet of its adversary, Greece."[580] Qatar is sending 250 military personnel and 36 fighter jets to Turkey for training.[581]

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 facility, 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. In January 2018, the U.S. relocated an A-10 squadron from Incirlik to Afghanistan to avoid operational disruptions; these aircraft have since returned to their home base in Missouri following the U.S. withdrawal. 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."[582] The U.S. reportedly began to review plans to remove nuclear weapons from Incirlik in 2019, but no such decision has yet been taken, at least as far as is publicly known.

Turkey's Konya Air Base continues to support NATO AWACS aircraft involved in counter-ISIS operations, and Spain has deployed a Patriot system in the Turkish city of Adana under NATO auspices since 2015.[583] Turkey also hosts a crucial AN/TPY-2 radar at Kurecik that is part of NATO's BMD system and "may have the ability to track targets more than 1,800 miles away, depending on its position."[584]

Turkey has a 355,200-strong active-duty military,[585] which is NATO's second largest after that of the United States, but as one analyst has cautioned, "the size of the military is a direct result of conscription. Mandatory military service, however, does not often translate into power."[586] The Turks have contributed to a number of peacekeeping missions in the Balkans; still maintain 335 troops in Kosovo;[587] 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 is among countries listed as contributors to the Standing NATO Maritime Groups and Standing NATO Mine Countermeasures Groups.[588] It has taken part in Baltic Air Policing twice, most recently from May–September 2021 when four F-16s and 80 troops deployed to Malbork, Poland.[589] In 2021, Turkey commanded NATO's Very High Readiness Joint Task Force.[590]

Turkey, which in 2023 will spend only 1.37 percent of GDP on defense and 25.52 percent of its defense budget on equipment,[591] has become increasingly self-reliant with respect to its defense capabilities. A particular success has been its Bayraktar drone program, and Turkey is investing further in autonomous systems. This is paying dividends: Turkey surpassed its export target in 2022, attaining $4.4 billion in arms exports, and hopes to export $6 billion in arms in 2023.

Between 2020 and 2021, "[r]evenue from overseas defense exports rose by 42%…with foreign contracts making up as much as 90% of revenue for some Turkish companies—like Baykar."[592] Nevertheless, $6 billion will fall short of the $10.2 billion export target for 2023 set out in the Strategic Plan 2019–2023 released in December 2019 by Turkey's Presidency of Defense Industries.[593] The plan also "aims to meet 75% of its weaponry requirements through indigenous production by 2023. However,

GlobalData's forecast suggest[s] this number will narrowly be missed, with only 71% of procurements in 2023 likely to fulfill this target."[594]

A key struggle is Turkey's continued reliance on components from Western companies, including for its drones. In particular, the Bayraktar drone relies on "optical/infrared imaging and targeting sensor systems" from a Canadian company.[595] As one analyst has written:

> Overall, Turkish industries can now design, produce, modernize, and export—at varying levels of domestic contribution—some core conventional arms and equipment such as corvettes, fire support systems, unmanned aircraft systems, gliding munitions for drones, joint-direct attack munitions, across-the-spectrum land warfare platforms (except for main battle tanks), grenade launchers, and tactical anti-material rifles. On the other hand, the defense sector demands international cooperation, marking the limits of independence, at least at the time being, on strategic weapons and high-end arms, such as exo-atmospheric ballistic missile defense, fifth-generation tactical military aviation, air-independent propulsion submarines, and space-based assets....[596]

Over "the next two to three years," more than 350 indigenously produced Atmaca anti-ship cruise missiles will replace U.S.-produced Harpoon missiles on Turkey's Ada–class corvettes, Istanbul–class frigates, and TF2000–class anti-air warfare destroyers" with a goal of saving as much as $500 million "as the homemade missile comes in at around half the price of a Harpoon."[597]

Turkey "also has plans for a 'mobile naval mine' that can be used for surveillance and to attack ships, as well as for unmanned fighter jets and strike aircraft to be used on its amphibious assault ships, which officials say will be able to carry 30 to 50 drones."[598] The first flight test for the prototype of the unmanned fighter, the Bayraktar Kizilelma, took place on December 14, 2022. The jet purportedly "will be able to take off and land on aircraft carriers with short runways and conduct missions with internally carried munitions."[599]

In addition, Turkey is seeking to modernize its manned aircraft, especially in light of planned Greek procurements of F-35s and French Dassault Rafales F3R fighters.[600] In October 2021, Turkey made a request to purchase 40 F-16 fighters and 80 modernization kits for its older fleet of F-16s, and in a March 2022 letter to Congress, the State Department found "compelling long-term NATO alliance unity and capability interests, as well as U.S. national security, economic and commercial interests that are supported by appropriate U.S. defense trade ties with Turkey."[601] In May 2022, the Biden Administration asked Congress to approve the sale of electronics, missiles, and radar to Turkey for F-16 upgrades.[602] Following Turkey's June 2022 announcement that it was lifting its objections to Finland and Sweden joining NATO, the Administration reiterated its support for the modernization kits and the sale of new F-16s to Turkey because, "Turkey's modernization of its fighter fleet...is a contribution to NATO security and therefore American security."[603]

In January 2023, the State Department informed Congress that it intended to proceed with the $20 billion sale of new F-16s and modernization kits.[604] Congress remains opposed, partly because of Turkey's continued blocking of Sweden's accession to NATO despite its earlier assurances.[605] While "Congress can block a sale by passing a resolution of disapproval after a formal notification of a sale," it is unclear whether the Administration would proceed in the face of congressional disapproval or whether Congress could muster the votes to block a sale if it were to take place.[606] Absent U.S. modernization kits, Turkey once again is turning to its own domestic industry to modernize its aging fleet. Its Ozgur Project "includes new avionics, structural improvements, and a locally-produced active electronically scanned array (AESA) radar that will be retrofitted onto its Block 30 F-16s."[607]

Turkey's procurement of 250 new Altay main battle tanks has been delayed for years because of the need to acquire foreign components. The tank had relied on a German-made engine and transmission, as well as French armor, but the technology transfer was not approved. In March 2022, Turkey announced an agreement with two South Korean manufacturers to produce the engine and transmission for the tank.[608] In January 2023, President Erdogan announced that two Altays would be delivered in May and that long-delayed mass production would begin in 2025.[609]

In January 2022, after years of delays, Pakistan cancelled a $1.5 billion deal for 30 T129 ATAK

helicopters that had been signed in 2018.[610] The helicopter's engine is produced by American and British firms, and Turkey has yet to field a domestic replacement. In April 2021, the U.S. granted export licenses for the sale of six T129s to the Philippines; its refusal to issue export licenses for the sale to Pakistan led to the deal's cancellation.[611] In February 2022, Turkey announced that a Ukrainian-developed engine for its larger T929 helicopter gunship would be produced in Turkey. The first two engines were delivered to Turkey in March 2023. The helicopter is scheduled to make its first flight this year.[612]

France and Italy continue to block joint development of anti-ballistic missiles with Turkey because of Turkey's actions in Syria.[613] President Erdogan has personally lobbied French President Macron to allow Turkey to purchase the French–Italian EUROSAM consortium's SAMP/T missile-defense systems.[614] In March 2022, France and Italy reportedly agreed to "explore reviving the steps for the SAMP/T missile defense system."[615] Italian Prime Minister Meloni reportedly made similar statements about wanting to find a solution to the impasse in November.[616]

Another major procurement is for six Type-214 submarines. The first, the TCG *PiriReis*, was launched in May 2021, underwent sea trials in December 2022, and will likely enter service in 2023, and one of the remaining five will be delivered each year from 2023–2027.[617] In February 2019, Turkey announced that upgrades of four *Preveze*–class submarines would take place from 2023–2027.[618] In February 2022, it was reported that "sea acceptance trials of the early delivered systems and the Critical Design Phase of the Preveze Mid-Life Modernisation Project have been successfully completed."[619]

The intelligence-gathering ship TCG *Ufuk*, which President Erdogan has described as the "eyes and ears of Turkey in the seas,"[620] was commissioned in January 2022.[621]

The Baltic States. The U.S. has championed the sovereignty and territorial integrity of the Baltic States ever since the interwar period of the 1920s. Since regaining their independence from the Soviet Union 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.

Estonia. Estonia has been a leader in the Baltics in terms of defense spending. In 2022, it spent 2.12 percent of GDP on defense and 21.57 percent of its defense budget on new equipment.[622] In December, Prime Minister Kaja Kallas announced that Estonia's defense budget would exceed 3 percent of GDP by 2024.[623]

In September 2022, Estonia signed an agreement to acquire the short-range, man-portable Piorun air defense system with delivery of 100 Piorun gripstocks and 300 missiles to begin in the second half of 2023.[624] Estonia is also expected to announce a contract for the joint procurement with Latvia of medium-range air defense systems and "could be getting its own medium-range air defense system in three years' time."[625] In October 2021, Estonia signed a contract to purchase the Blue Spear 5G coastal shore-to-ship mobile defense system.[626] The system, likely to arrive by the end of 2023,[627] will be integrated with Finland's coastal defense systems, "which would allow the countries to close the Gulf of Finland to Russian warships if necessary."[628]

Estonia's Ministry of Defence Development Plan 2031, released in December 2021, details investments in ammunition stocks along with renovation of Ämari airfield, a modern War and Disaster Medicine Centre in Tartu, "mid-range anti-tank weapons for all infantry brigades," R-20 Rahe assault rifles, a mid-range air surveillance radar, CV-9035 armored combat vehicle upgrades, and naval mines.[629] In February 2022, Estonia announced its largest defense procurement, a $794 million joint Estonia–Latvia purchase of "mostly logistical vehicles including cranes, loaders and aircraft loaders"[630] that were "expected to start arriving in 2023."[631] In December 2022, Estonia signed an agreement for six M142 High Mobility Artillery Rocket Systems worth more than $200 million with deliveries to begin in 2024. "[I]n addition to the weapon system," according to an Estonian Centre for Defence Investments official, "Estonia will also procure ammunition, communications solutions, as well as training, logistics, and life-cycle solutions. The package includes rockets with different effects, ranging from 70 to 300 kilometers."[632]

Although the Estonian armed forces total only 7,200 active-duty personnel (including the army, navy, and air force),[633] 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 was to Afghanistan: More than 2,000 Estonian troops were deployed between 2003 and 2014 and 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.[634] The number of conscripts will increase from 3,500 in 2022 to 3,800 in 2024 and 4,000 in 2025 at a cost of €4 million a year for each additional 500 conscripts in addition to barracks and other facilities to "meet the increased need for space across units."[635]

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 24 South Korean–built K9 self-propelled howitzers at a total cost of $88 million and as of January 2023 had taken delivery of 18.[636] That same month, it signed a $38.9 million contract for an additional 12 K9s with deliveries through 2026.

In October 2020, Estonia withdrew from a joint armored vehicle development program with Latvia and Finland for financial reasons, but in April 2022, it announced an expedited €200 million procurement for 220 wheeled armored vehicles.[637] In 2019, it received two C-145A tactical transport aircraft donated by the U.S.[638]

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. U.S. Ambassador James Melville called the agreement "a major step for enhanced defense and security cooperation in the context of the North Atlantic Alliance."[639]

Estonian forces have participated in a number of operations. These involvements include, for example, 45 soldiers in Resolute Support before its end, a vessel as part of the Standing NATO Mine Countermeasures Group One, a logistics officer for the EU's Operation IRINI, and troops for NATO Mission Iraq and the U.S.-led Operation Inherent Resolve in Iraq.[640] In February 2022, Estonia announced the withdrawal from Mali of 95 troops who had been taking part in the French-led Operation Barkhane, completed in November 2022.[641]

Latvia. Latvia's recent military experience 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. It also has contributed to a number of other international peacekeeping and military missions. Its clear focus, however, is territorial defense.

A recent IISS analysis notes that "[t]here is no capacity to independently deploy and sustain forces beyond national boundaries, although the armed forces have taken part in NATO and EU missions."[642] Nevertheless, despite a military that consists of only 6,600 full-time servicemembers, Latvia deployed troops to NATO's Resolute Support Mission until the mission's completion; participates in Operation Inherent Resolve in Iraq, where the mandate for Latvian soldiers taking part was extended in March 2022 and now runs until February 2024; and has 136 troops deployed in NATO's KFOR mission.[643]

Latvia aims "to increase the share of combat-ready population…to 50,000" by 2027, with 14,000 "to operate in active service units," 16,000 "to serve in the National Guard," and 20,000 "in the reserve force."[644] In April 2023, the Latvian parliament passed a bill reintroducing mandatory military conscription for males aged 18 to 27 (conscription had been abolished in 2007).[645] Conscripts can serve "11 months in the National Armed Forces or the National Guard; five years in the National Guard, with at least 21 individual training days per year and 7 collective training days per year; [or by] finishing a five-year education university program of a Reserve Lieutenant."[646]

In 2022, Latvia's former Minister of Defense raised the possibility of opening "a new training field and a second international base" in Latvia for allied forces that "are currently based in Ādaži."[647] In November 2022, the Canadian commander of NATO's EFP in Latvia expressed his view that "[t]he amount of resources that the Russians have invested now in Ukraine, and that they are losing in Ukraine, is reducing their ability to do something in this theatre rapidly." Nevertheless, the Russians are still a threat: "What they're going to do in the future is really in President (Vladimir) Putin's hands…but the threat is very real."[648]

In 2022, Latvia spent 2.07 percent of GDP on defense and 24.58 percent of its defense budget on equipment, exceeding both NATO benchmarks.[649]

Latvia continues to bolster its defense budgets, spending around 2.25 percent of GDP on defense in 2023. In February, Defense Minister Ināra Mūrniece stated that the nation could hit 3 percent of GDP on defense before the planned date of 2027 due to upcoming procurements.[650] Contracts for the acquisition of six M142 HIMARS, for example, could be signed in 2023,[651] and Latvia is also reportedly in negotiations to purchase the Norwegian-made Naval Strike Missile Coastal Defence System sometime in 2023.[652]

In December 2022, the first two of Latvia's four UH-60M Black Hawk helicopter procurement (a $200 million agreement signed in 2018) were delivered from the U.S. with the remaining two "slated for delivery by the end of 2023." As of December 2022, five crews had been trained on the Black Hawks, which are replacing Latvia's Mi-17 helicopter fleet, and "Latvian personnel [had] been training for future helicopter flight and maintenance since 2020."[653]

Latvia is also procuring the RBS 70 NG short-range ground-based air defense system and Giraffe 1X radar from Swedish manufacturer Saab[654] and in June 2022 "signed a joint letter of intent [with Estonia] for the purchase of medium-range air defense systems."[655] According to the IISS, "Estonia signalled its intention in 2022 to join the European Sky Shield initiative, to boost air defence capacity. As well as capability development, modernisation spending is directed toward improving infrastructure and readiness."[656] Other joint procurements include (with Estonia) logistics vehicles and (with Finland) 200 armored vehicles for Latvian forces, the first two of which were delivered in March 2022 and all of which are to be delivered by 2029.[657]

Latvia is upgrading fencing along its border with Belarus into permanent fencing to stem the flow of migrants "illegally pushed into Latvia from Belarus."[658] The first phase of the upgrade will be completed in the fall of 2023, with the second and third phases complete by the end of 2024.[659] Early in 2022, Latvia's State Border Guard received 67 Polaris tactical vehicles worth $2 million from the United States. "Since 2018, the United States has provided more than seven million dollars in aid to the Latvian Border Guard," which was "scheduled to receive another 18 'Polaris' tactical vehicles by the end of [2022]."[660]

Lithuania. Lithuania is the largest of the three Baltic States, and its armed forces total 23,000 active-duty troops.[661] The government reintroduced conscription in 2015 and lowered the age for compulsory service in December 2019.[662] In January 2023, Chief of Defence Valdemaras Rupšys detailed potential conscription reforms to "help achieve the goal of having 40,000 active reserve soldiers in the armed forces."[663]

Lithuania has shown a steadfast commitment to international peacekeeping and military operations. Between 2003 and 2011, it sent 930 troops to Iraq. From 2002–2021, around 3,000 Lithuanian troops served in Afghanistan, and Lithuania continues to contribute to NATO's KFOR, NATO Mission Iraq, and a few EU-led missions in Africa. Lithuania has supported Ukraine in part by taking part in the U.K.-led Operation Interflex to train and support Ukraine's territorial defense forces, as well as the German-led EU Military Assistance Mission in support of Ukraine training.[664] Lithuania trained Ukrainian forces even before 2022 and will train about 2,000 Ukrainian troops this year.[665]

In 2022, Lithuania spent 2.47 percent of GDP on defense and 34.54 percent of its defense budget on equipment.[666] In March 2023, Lithuania added another € 97.5 million to its defense budget for the year, raising defense spending to 2.52 percent of GDP for the year. "The Defence Ministry has said it will use additional funds for speeding up certain planned acquisitions, for instance, of multiple launch rocket systems, combat drones, as well as other arms and ammunition."[667]

In April 2019, the U.S. and Lithuania signed a five-year "road map" defense agreement.[668] According to the DOD, the agreement will help "to strengthen training, exercises and exchanges" and help Lithuania "to deter and 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."[669] A Mobilisation and Host Nation Support law took effect in January 2021.[670] In December 2021, the U.S. and Lithuania signed a Reciprocal Defense Procurement Agreement that U.S. Secretary of Defense Austin stated "will improve conditions for the acquisition of defense items and increase military interoperability."[671]

The IISS notes that "Lithuania signalled its intention in 2022 to join the European Sky Shield initiative, to boost air defence capacity. Vilnius is also looking to acquire new rocket artillery capabilities, in common with other Baltic states, and acquire additional self-propelled artillery as well as loitering munitions."[672]

In November 2020, Lithuania signed a $213 million deal to purchase four UH-60M Black Hawk helicopters beginning in late 2024; the U.S. is contributing approximately $30 million to help with the acquisition.[673] In October 2022, Lithuania signed a $32 million contract to procure additional Swedish-made RBS 70 "very short range air defense missiles," to be delivered in 2023 and 2024.[674]

In October 2020, Lithuania received two Norwegian-made NASAMS mid-range air defense batteries "armed with US-made advanced medium-range air-to-air missiles (AMRAAM) that can destroy aircraft and missiles located at a distance of several tens of kilometres."[675] Lithuania plans to acquire additional NASAMs in 2023, and according to one analyst, "Just having this system is like a big deterrent hedgehog for enemy planes."[676] In February, Lithuanian President Gitanas Nauseda said that "Lithuania is ready to contribute to repairing the NASAMS medium-range air defense systems handed over to Ukraine."[677]

In March 2022, Lithuania announced a $40 million purchase of additional Javelin anti-tank weapons.[678] In April 2021, the U.S. donated $10 million worth of M72 Light-Armor Weapons to Lithuania.[679] In December 2022, Lithuania announced a $48 million contract for an unspecified number of Switchblade 600 kamikaze drones.[680] In October 2022, Lithuania increased its order of U.S.-made Oshkosh Joint Light Tactical Vehicles (JLTV) from 200 to 500. About 100 vehicles were delivered in 2022, with the remaining expected from 2023 to 2024.[681] In January 2022, it was reported that Saab had recently "signed a framework agreement with the Lithuanian Ministry of Defence to provide the country with several Carl-Gustaf M4 recoilless weapons and ammunition" and that Lithuania's "Defence Materiel Agency has placed a $16.7 million ammunition order as part of the framework agreement."[682]

In December 2022, Lithuania and the U.S. signed a $495 million agreement for eight M142 HIMARS systems with deliveries beginning in 2025 and ending in 2026. The agreement "includes Army Tactical Missile Systems, or ATACMS, which have a range of 300 kilometers, and other ammunition. A State Department notice [in November 2022] said several dozen Guided Multiple Launch Rocket Systems, and variants of them, would be included."[683]

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 peace dividend following the end of the Cold War, the number of U.S. troops in Europe was slashed. Today, the U.S. has fewer than 66,000 active-duty forces permanently stationed in Europe. However, increased numbers of rotational forces deployed to Europe to bolster deterrence in eastern NATO member states have raised total U.S. deployments to around 100,000.[684]

EUCOM "*executes a full range of multi-domain operations in coordination with Allies and partners to support NATO, deter Russia, assist in the defense of Israel, enable global operations, and counter trans-national threats in order to defend the Homeland forward and fortify Euro-Atlantic security.*"[685] It is supported by four service component commands (U.S. Naval Forces Europe, U.S. Army Europe and Africa, U.S. Air Forces in Europe, and U.S. Marine Forces Europe) and one subordinate unified command (U.S. Special Operations Command Europe).

In response to Russia's second invasion of Ukraine, EUCOM created Control Center Ukraine (ECCU) to coordinate defense assistance to Ukraine. A "senior defense official" has described ECCU as "a combination of a call center, a watch floor, meeting rooms. They execute a battle rhythm to support decision-makers as well as 24/7 engagement and coordination around the globe with about 40 to 60 people at any given time."[686]

Conclusion

The European region remains a mature and friendly operating environment. Russia remains the preeminent military threat, and its continued operations against Ukraine have added instability to the theater, particularly in the Black Sea region. In addition to the threat from Russia, Chinese propaganda, influence operations, and

investments in key sectors present an additional—and serious—threat.

The past year has proven to be an inflection point for transatlantic security with many European allies reinvesting in defense and capabilities. The long-term capacity of allies to sustain a commitment to defense remains to be seen, as does the outcome of the Russia–Ukraine war, which is dramatically reshaping the threat perception in Europe and necessitating operational planning that takes into account what is transpiring on a daily basis.

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 or near the European region, there is a history of interoperability with allies and access to key logistical infrastructure despite very real military mobility shortfalls 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. NATO continues to return to a war footing, seeking to relearn the lessons of the past, and to put in place the doctrine, plans, and force structure necessary to provide a lasting deterrent to Russia.

The military, economic, political, and societal impact of Russia's aggression in Ukraine, including China's support for and enablement of the regime in Moscow, will have to be reckoned with for years to come. Though Russia is experiencing significant battlefield losses, it will be prudent for defense planners to assume that Russia will replace those losses of old equipment with modern, improved items, thereby sustaining the challenge to U.S. and NATO-partner security interests.

NATO's renewed focus on collective defense has resulted in a focus on logistics, force generation, capability investment, newly established commands that reflect a changed geopolitical reality, and a robust set of exercises. NATO's biggest challenges derive from potential spillover from Ukraine, arming and assisting Ukrainian forces with rapidly depleted stocks, continued capability and readiness gaps for many European nations, continuing improvements and exercises in the realm of logistics, 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 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 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 success 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, the duration of Russia's war on Ukraine, its mounting cost and savagery, and the questions it poses for the future of Europe, NATO, and individual countries has forced European governments and citizenry to seriously consider the conditions of their political dynamics, economic dependencies, and their ability to provide for domestic security interests. In the *2023 Index*, we noted a strengthening in alliance relationships as NATO member countries conducted reviews of their respective military establishments and the ability of NATO, as a whole, to properly coordinate actions. NATO placed renewed emphasis on logistical matters and the extent to which it could respond to an emergent crisis. In 2024, we have seen a galvanizing effect within political establishments that, while continuing to be dynamic and pointed within the domestic context of each country, appear to be improved in their aggregate stability as countries get serious about national matters that have arguably been neglected since the end of the Cold War. Within specific countries there are ongoing shifts between liberal and conservative governments but the net result has been generally positive with respect to U.S. security interests, especially as countries commit to improving their defense capabilities, readiness, and posture. This has led us to increase Europe's score for political stability from Favorable to Excellent.

- Alliances: **5—Excellent**
- Political Stability: **5—Excellent**
- 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. Each year, NATO publishes a report on the defense spending of member countries that covers the preceding 10-year period. See: "Defence Expenditure of NATO Countries (2014-2023)," NATO Public Diplomacy Division Press Release, July 7, 2023, https://www.nato.int/nato_static_fl2014/assets/pdf/2023/7/pdf/230707-def-exp-2023-en.pdf (accessed July 20, 2023). Per the latest report, NATO as a whole, though *not counting the U.S.*, realized a 30 percent increase in defense spending from 2014 to 2023 while the U.S. showed an increase of 11.2 percent, per figures provided on page 7. Notably, Lithuania increased its spending 270.6 percent over the decade, Poland 189.5 percent, and Estonia 77.5 percent. On the lower end of the range were France at 15.2 percent increase, Norway with 25.29 percent, and Belgium at 33.72 percent. Each of these three countries—France, Norway, and Belgium—spent 1.90 percent of GDP, 1.67 percent, and 1.13 percent, respectively, in 2023, well short of NATO's two percent objective. In their camp were Luxembourg (0.72 percent), Spain (1.26 percent), Italy (1.46 percent), and Germany (1.57 percent), each spending in 2023 amounts well below the NATO target (numbers taken from p. 8 of the NATO report).
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Middle East

Nicole Robinson

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

America's vital national security interests in the Middle East endure but have evolved beyond 1981 when the United States was dependent on Middle East oil. By 2018, the U.S. imported only 11 percent of its oil, the lowest amount since 1957.

The Middle East is a critical component of the global economy. It accounts for 31 percent of global oil production, 18 percent of gas production, 48 percent of proven oil reserves, and 40 percent of proven gas reserves. Approximately 12 percent of global trade and 30 percent of global container traffic traverses the Suez Canal, transporting more than $1 trillion worth of goods each year. In 2018, the Middle East's daily oil flow constituted approximately 21 percent of global petroleum consumption. Moreover, the region's significance is not limited to energy. Sixteen of the submarine cables that connect Asia and Europe pass through the Red Sea. While the United States may no longer be dependent on the region's petrochemical resources, the global economy is.[1]

The region is home to a wide array of cultures, religions, and ethnic groups: 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, characterized by long-standing divisions that, exacerbated by religious extremists' constant vying for power, in some cases are centuries-old. Contemporary conflicts, however, have more to 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.[2]

In a way that many in the West do not understand, religion remains a prominent fact of daily life in the modern Middle East, and the friction within Islam between Sunnis and Shias—a friction that dates back to the death of the Prophet Muhammad in 632 AD[3]—is at the heart of many of the region's conflicts. Sunni Muslims, who form the majority of the world's Muslim population, hold power in most of the region's Arab countries.

However, viewing the Middle East's current instability through the lens of a Sunni–Shia conflict does not reveal 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. 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's population is one of the youngest and fastest-growing in the world. This would be viewed as an advantage in most of the West, 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 more than half of the region's inhabitants are less than 30 years old, this demographic bulge will continue to undermine political stability across the region.[4]

The Middle East has 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. actually imports relatively little of its oil from the Middle East. Nevertheless, it 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 fell temporarily 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, both of which tried to maintain revenue by increasing the price of the reduced amount of oil sold. Although both countries eventually agreed to reduce production by 12 percent, the plummet in oil prices during 2020 caused significant shocks for both exporters and importers.[7]

U.S. energy policies during 2021 exacerbated the problem. The new Administration's decisions to shutter some existing energy production and refuse permission for new exploration made the U.S. more sensitive to Middle East–based volatility in the energy market. Then Russia's invasion of Ukraine made matters worse. The price of oil jumped to more than $139 a barrel while gas prices doubled—the highest levels for both in almost 14 years.[8] In November 2021 and February 2022, Saudi Arabia declined a U.S. request to increase oil production, choosing instead to abide by the April 2020 agreement between the Organization of the Petroleum Exporting Countries (OPEC) and Russia to cut production.[9] Then, in April 2023, OPEC and Russia announced a massive supply cut totaling 1.6 million barrels per day, causing oil prices to jump by $7 a barrel.[10]

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 the world's third-largest economy[11] and largest importer of liquefied natural gas (LNG).[12] The U.S. might not have to depend on Middle East oil or LNG, but the economic consequences arising from a major disruption of supplies would ripple across the globe. Thus, tensions and instabilities continue to affect global energy markets and directly affect U.S. national security and economic interests.

Beijing knows the Middle East is a vital source of the energy that fuels its economic growth and military. China's economy and military depend on external resources, which helps to explain why it developed its Belt and Road Initiative (BRI) to obtain the resources it requires and sustain the routes that connect China to those resources. Imports currently constitute nearly 70 percent of China's overall oil consumption. Of these imports, 43 percent come from the Gulf region, and China's oil imports will continue to grow to an estimated 80 percent of its total consumption by 2030.[13] *It would be a grave strategic error to abandon the Middle East and its petrochemical resources, which sustain the global economy, to Xi Jinping and the Chinese Communist Party*.

Financial and logistics hubs are growing along some of the world's busiest transcontinental trade routes, and 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 is part of what drives the region's political environment. The lack of economic freedom helped to fuel the popular discontent that led ultimately to the Arab Spring uprisings, which began in early 2011 and disrupted economic activity, depressed foreign and domestic investment, and slowed economic growth. Sustained financial and economic growth could lead to greater opportunities for the region's people, but tensions will persist as countries compete for this added wealth.

The COVID-19 pandemic and Russia's war on Ukraine have had massive repercussions for the entire region, affecting economies and shaking

political systems. The World Bank "forecast[s] that the MENA [Middle East and North Africa] region will grow by 3 percent in 2023 and by 3.1 percent in 2024, much lower than the growth rate of 5.8 percent in 2022."[14] Countries that were already facing economic challenges before the pandemic are now facing a long period of recovery during which the likelihood of political instability in an already fragile region can be expected to increase.

The political environment has a direct bearing on how easily the U.S. military can operate in any region of the world. The political situation in many Middle Eastern countries remains fraught with uncertainty. The Arab Spring uprisings of 2010–2012 formed a sandstorm that eroded the foundations of many authoritarian regimes, erased borders, and destabilized many of the region's countries,[15] 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 would happen. 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 issues of endemic corruption, high unemployment, and the rising cost of living remain unresolved. Since 2019, large-scale protests have called attention to the region's lack of economic and political progress. COVID-19 lockdowns and curfews temporarily disrupted protests in Lebanon and Iraq. Demonstrations resumed in 2020 but failed to gain momentum. More recently, the spike in food and gas prices caused in part by the Russian invasion of Ukraine has sparked demonstrations in Iraq and bank robberies in Lebanon[16] that, along with ongoing socioeconomic deterioration, have further fueled discontent.[17] If similar protests were to break out across the region, they could easily affect the operational environment for U.S. forces.

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), for example, Iran exploited Shia–Sunni tensions to increase its influence on embattled regimes and undermine 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] and imposed a crippling economic sanction program in a "maximum pressure campaign" with more than 1,500 sanctions that targeted individuals and entities that were doing business with Iran.[19] The sanctions were 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]

Many of America's European allies publicly denounced the Trump Administration's decision to withdraw from the JCPOA, but 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]

However, the Biden Administration's efforts to resurrect the JCPOA threaten to disrupt the gains made by the Trump Administration. On February 18, 2021, the Biden Administration rescinded President Donald Trump's restoration of U.N. sanctions on Iran, thereby signaling President Joseph Biden's willingness to negotiate a nuclear agreement with Iran.[22] Indirect talks brokered by the European Union between U.S. and Iranian diplomats in Vienna resumed in April 2021.

From the beginning, Iran has been mounting its own maximum-pressure campaign to force President Biden to lift sanctions and return to the 2015 agreement without imposing conditions. The Administration has lifted sanction designations on several entities and individuals several times over the course of the negotiations to inject momentum but with little to show for it.[23] Unacceptable Iranian demands for non-nuclear sanctions relief, including the lifting of U.S. terrorist sanctions on the Islamic Revolutionary Guard Corps (IRGC), and a guarantee that the International Atomic Energy Agency's investigation of Iran's nuclear activities would be ended led to the suspension of negotiations in September 2022.[24]

Despite Iran's insistence, the Biden Administration has rightly refused to lift the terrorist designations of the IRGC.[25] Anti-regime protests in Iran, sparked by the murder of 22-year-old Mahsa

Amini by the morality police, and Iran's supplying of missiles and drones to Russia have made further negotiations politically difficult.[26] Yet the Biden Administration is currently discussing a "freeze-for-freeze" approach to Iran's nuclear program that would grant partial sanctions relief in exchange for a partial freeze of Iran's nuclear program.[27]

Tehran attempts to run an unconventional empire by exerting great influence on sub-state entities like Hamas in the Palestinian territories, Hezbollah in Lebanon, the Mahdi movement and other Shia militias in Iraq, and the Houthi insurgents in Yemen. The Iranian Quds Force, the special-operations wing of the IRGC, has 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 an 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.[28] Under the Biden Administration, attacks by Iran's proxies against U.S. forces in the region have increased dramatically. Since President Biden took office, Iranian proxies have carried out drone and rocket attacks against U.S. troops in the region 83 times according to U.S. Central Command. Washington has responded with force only four times.[29]

In Afghanistan, Tehran's influence on some Shiite groups is such that thousands have volunteered to join IRGC-led militias deployed to fight for Bashar al-Assad in Syria.[30] Iran also provided arms to the Taliban after it was ousted from power by a U.S.-led coalition[31] and has long considered the Afghan city of Herat near the Afghanistan–Iran border to be within its sphere of influence. The Biden Administration's disastrous withdrawal from Afghanistan paved the way for a Taliban takeover and a deepening of ties between Tehran and Kabul, increasing Iran's growing influence in the region.

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 economic problems, and Jordan has been inundated by a flood of Syrian refugees and is threatened by the instability in Syria.[32] Meanwhile, Tehran has continued to build up its missile arsenal, which is the largest in the Middle East; has continued its efforts to prop up the Assad regime in Syria; and supports Shiite Islamist revolutionaries across the region.[33]

To raise funds for its regional proxies, Iran works with rogue actors in Iraq, Lebanon, and Syria to traffic drugs like Captagon, a psychostimulant that has become the most in-demand narcotic in the region. The more than $10 billion Captagon trade bankrolls the Bashar al-Assad dictatorship in Syria, Lebanese Hezbollah, and Popular Mobilization Forces in Iraq and has sparked a regional drug war that especially affects Saudi Arabia, Jordan, and other countries in the Persian Gulf.[34] If violence were to break out among rival drug cartels, the effects on the operational environment for U.S. forces could be significant.

Tehran's main partner in the drug trade is Syria's Bashar al-Assad regime, whose 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, "15.3 million people in need of humanitarian and protection assistance in Syria"; "5.3 million Syrian refugees worldwide, of whom 5.5 million hosted in countries near Syria" like Turkey, Lebanon, and Jordan; and "6.8 million internally displaced persons" within Syria.[35] 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.[36] 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 more than 25,000

fighters from outside the region to join its ranks in Iraq and Syria. These foreign fighters included thousands from Western countries, among them the United States.

In 2014, the U.S. announced the formation of a broad international coalition to defeat the Islamic State. By early 2019, the territorial "caliphate" had been destroyed by a U.S.-led coalition of international partners. However, the socioeconomic meltdown of Lebanon and ongoing fighting in Syria present the ideal environment for the IS to reconstitute itself. Multiple reports indicate that the IS is recruiting young men in Tripoli, Lebanon.[37] There is a real danger that IS or other Islamic extremists could capitalize on the security vacuum created by that country's ongoing deterioration.[38] The fall of Afghanistan has also opened the door for a revival of al-Qaeda in Afghanistan. Rebuilding the group will take time, but al-Qaeda remains a long-term threat to American interests and citizens as well as to the homeland.[39]

Arab–Israeli tensions are another source of regional instability. 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.

The signing of the Abraham Accords in 2020 caused a brief spark of hope. These U.S.-brokered agreements normalizing relations between Israel and the UAE, Bahrain, Morocco, and Sudan have created new opportunities for trade, investment, and defense cooperation.[40] To strengthen the Abraham Accords, the U.S., Egypt, the UAE, Bahrain, Morocco, and Israel established the Negev Forum, a new framework for cooperation in the region with six working groups: Clean Energy, Education and Coexistence, Food and Water Security, Health, Regional Security, and Tourism.[41] These efforts are important milestones in the diplomatic march toward a broader Arab–Israeli peace.[42]

However, Israeli–Palestinian tensions have worsened over the past three years. In both April 2021 and 2022, Hamas fired a barrage of rockets into Israel from Gaza following deadly violence and attacks in Jerusalem's Old City. Israel responded with air strikes.[43] In 2023, tensions took on a new dimension after days of escalating violence in Jerusalem led to rockets being fired not only by Hamas in Gaza, but also by the Al-Quds Brigades, an armed wing of the Syria-based Palestinian Islamic Jihad.[44] Increased violence threatens the stability of Israel at a time of increased internal division. In March 2023, tens of thousands of Israelis took to the streets to protest judicial reforms proposed by the Netanyahu government.[45] As this book was being prepared, the situation remained tense.

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.

In 2017, the Trump Administration proposed the idea of a multilateral Middle East Strategic Alliance with its Arab partners.[46] The initial U.S. concept, which included security, economic cooperation, and conflict resolution and deconfliction, generated considerable enthusiasm, but the project has since been sidelined although discussions are ongoing in Congress with a view to creating some sort of "regional security architecture" within the Abraham Accords framework.[47]

In April 2022, shortly after the March 2022 Negev summit, the U.S. established the 34-nation Combined Task Force 153 "to enhance international maritime security and capacity-building efforts in the Red Sea, Bab al-Mandeb and Gulf of Aden."[48] Over the spring and summer of 2022, the U.S. organized regional discussions about air-defense cooperation.[49] To build on these agreements, the U.S. will host Negev Forum partners for defense meetings in 2023 that will focus on capacity-building and the sharing of best practices on such issues as border security, disaster preparedness, and climate change. Traditionally, however, Middle Eastern countries 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.[50] These nations severed all commercial land, air, and sea travel with Qatar and expelled Qatari diplomats and citizens. 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 détente paves the way for full reconciliation in the GCC and, at least potentially, a more united front in the Gulf.[51]

Military training is an important part of these relationships. Exercises involving the United States 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.[52] 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.

Ties between the U.S. and Israel improved significantly during the Trump Administration, encouraged by the relocation of America's embassy from Tel Aviv to western Jerusalem in 2018 and the Administration's role in facilitating the Abraham Accords, which were signed in 2020, and so far have shown no signs of deteriorating under the Biden Administration.[53] Officials have stated, however, that the Abraham Accords are not a substitute for Israeli–Palestinian peace. At the same time, the Biden Administration has shown little interest in taking an active role in Israeli–Palestinian peace negotiations, explaining instead that it will promote equal rights for Palestinians and Israelis rather than focusing on resolving the overarching dispute.[54] If the conflict between the two sides continues to escalate, President Biden may find himself pressured to become more involved.

Saudi Arabia. After Israel, the deepest U.S. military relationship is with the Gulf States, including Saudi Arabia, which serves as de facto leader of the Gulf Cooperation Council. 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 October 2018 murder of Saudi dissident journalist Jamal Ahmad Khashoggi in the Saudi consulate in Istanbul, Turkey.

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.

Under the Biden Administration, bilateral relations have significantly deteriorated because the Administration turned a blind eye to Houthi aggression. For example, the Biden Administration lifted the Trump Administration's designation of the Houthi Ansar Allah (Supporters of God) movement as a terrorist organization despite Houthi drone and ballistic missile attacks against military and civilian targets in Saudi Arabia and the UAE. Both Saudi Arabia and the UAE have called for a redesignation of the Houthis, but as this book was being prepared, no such designation had been imposed.[55] The bilateral relationship has deteriorated further over oil production disputes. After OPEC+ decided to cut oil production,[56] the Biden Administration vowed that there would be "consequences" for Saudi Arabia. The Administration has failed to follow through on this threat, which has further strained the relationship between the two countries.

Gulf Cooperation Council. The GCC's member countries are located in an oil-rich region close to the Arab–Persian fault line and are therefore strategically important to the U.S.[57] The root of

Arab–Iranian tensions in the Gulf is Iran'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, Yemen, 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 2017 dispute regarding Qatar illustrates this difficulty.

Another source of disagreement involves the question of how best to deal with Iran. The UAE, Kuwait, and Saudi Arabia, all of which once opposed the Iran nuclear deal, have restored diplomatic relations with Tehran, the UAE and Kuwait in 2022 and Saudi Arabia in a deal brokered by China in March 2023.[58] Bahrain still maintains a hawkish view of the threat from Iran. Oman prides itself on its regional neutrality, and Qatar shares natural gas fields with Iran, so it is perhaps not surprising that both countries view Iran's activities in the region as less of a threat and maintain cordial relations with Tehran.

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 downfall of President Hosni Mubarak in 2011 after 30 years in power. 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. However, because of Egypt's ban on anti-government demonstrations and Sisi's tight control of internal security, there was only one outbreak of protests in 2018.[59] Internal security may deteriorate if historically high rates of inflation and bread prices continue to rise—a development that could trigger a new wave of anti-government protests—or if the Islamic State resurges inside Egypt.[60]

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's military budget is by far the region's largest, but in 2021 (the most recent year for which data are available), Oman spent the region's highest percentage of GDP on defense at 7.3 percent, followed by Kuwait at 6.7 percent. Saudi Arabia dropped down to third in the region at 6.6 percent. Qatar (based on data released for the first time since 2010) spent 4.8 percent of its GDP on defense.[61]

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."[62] States and non-state actors in the region have invested in asymmetric and unconventional capabilities to offset Israel's military superiority.[63] 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 Iran-backed militias and Islamic State terrorists.

The Israel Defense Forces (IDF) are considered the most capable military forces in the Middle East. Iran and other Arab countries have spent billions of dollars in an effort to catch up with Israel, but U.S. support preserves Israel's qualitative military

edge (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.[64] In response, Arab countries are upgrading their weapons capabilities while establishing officer training programs to improve military effectiveness.[65]

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.[66] The Israelis regard their cyber capabilities as especially important and use cyber technologies for a number of purposes that include defending Israeli cyberspace, gathering intelligence, and carrying out attacks.[67]

In 2010, Israel signed a $2.7 billion deal with the U.S. to acquire approximately 20 F-35I Adir Lightning fighter jets (the F-35I is a heavily modified version of the Lockheed Martin F-35 stealth fighter).[68] 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.[69] In December 2021, Israel also signed a $3 billion deal with the U.S. to buy 12 Lockheed Martin–Sikorsky CH-53K helicopters and two Boeing KC-46 refueling planes to replace the Sikorsky CH-53 Yas'ur heavy-lift aircraft that have been in use since the late 1960s. These aircraft would aid Israel in the event of conflict with Iran.[70]

Israel maintains its qualitative superiority in medium-range and long-range missile capabilities and fields effective missile defense systems, including Iron Dome, Arrow, and David's Sling, all of which have benefitted from U.S. financing and technical support.[71] 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 up-and-down nature of oil prices in recent years may force oil-exporting countries to adjust their defense spending patterns. Nevertheless, 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., United Kingdom (U.K.), and French equipment.

The GCC's most capable military force is Saudi Arabia's: an army of 75,000 soldiers and a National Guard of 130,000 personnel reporting directly to the king. Its army operates 1,010 main battle tanks including 500 U.S.-made M1A2s. Its air force is built around American-built and British-built aircraft and consists of more than 455 combat-capable aircraft that include F-15s, Tornados, and Typhoons.[72]

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. Bahrain is expected to receive its first batch of upgraded aircraft in 2024.[73] Qatar operates French-made Mirage fighters and has purchased at least 24 Typhoons from the U.K.[74]

In November 2020, the U.S. Department of State 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.[75] After a temporary freeze on arms sales by the Biden Administration, the sale moved forward in April 2021. The sale is somewhat controversial because of Israeli concerns about other regional powers also possessing the most modern combat aircraft and potentially challenging an important Israeli advantage.

Middle Eastern countries have shown a willingness to use their military capabilities under certain limited circumstances. The navies of GCC member countries rarely deploy beyond their Exclusive Economic Zones (EEZs), 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.[76] Egypt commands Combined Task Force 153, a 34-nation naval partnership established in 2022, as noted previously, "to enhance international maritime security and capacity-building efforts in the Red Sea, Bab Al-Mandeb

and Gulf of Aden."[77] In 2011, the UAE and Qatar deployed fighters to participate in NATO-led operations over Libya, 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.[78] 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 region's largest Arab military force.[79] 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.[80] Since then, its army and air force have been significantly upgraded with U.S. military weapons, equipment, and warplanes. Egypt's naval capabilities have also grown with the opening of a naval base at Ras Gargoub and the commissioning of a fourth Type-209/1400 submarine and a second FREMM frigate.[81]

Egypt has struggled with increased terrorist activity in the Sinai Peninsula, including attacks on Egyptian soldiers and 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.[82] Although the Egyptian army regained control of two IS-controlled villages, militant attacks against army affiliates in different parts of North Sinai and the kidnapping of tribal leaders threaten the stability of the area.[83]

The Hashemite Kingdom of Jordan is a close U.S. ally, and its military forces, while small, are effective. The principal threats to Jordan's security include terrorism, political turbulence, refugees, and the trade in Captagon spilling over from Syria and Iraq. Although Jordan faces few conventional threats from its neighbors, its internal security is threatened by Islamist extremists who have fought in the region and have been emboldened by the growing influence of al-Qaeda and other Islamist militants. As a result, Jordan's highly professional armed forces have had to focus 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 several French-made Leclerc tanks. Two squadrons of F-16 Fighting Falcons form the backbone of its air force,[84] 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 withdrawal of U.S. troops in 2011, Iraq's government selected and promoted military leaders according to political criteria.[85] 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 encouraged 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.[86]

The promotion of incompetent military leaders, poor logistical support because of 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.[87] 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.[88]

Since 2017, the capabilities and morale of Iraq's armed forces have improved, but there is still concern about Baghdad's ability to sustain operational effectiveness in the face of the current U.S. drawdown and redeployment of forces. The continued presence of armed militias presents the biggest obstacle to force unity.[89]

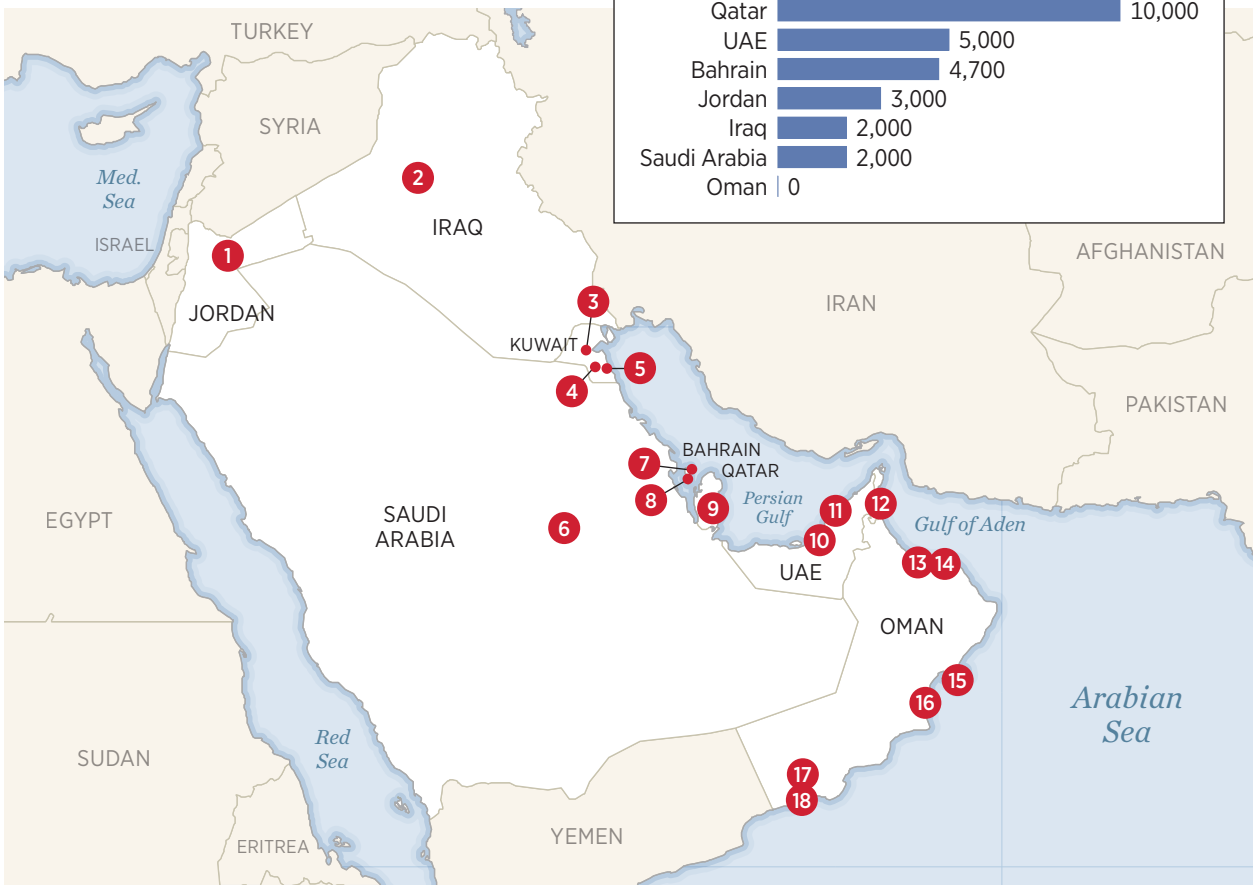
Current U.S. Military Presence in the Middle East

Before 1980, the limited U.S. military presence in the Middle East consisted chiefly of a small naval force that had been based in 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,[90] but the 1979 Iranian revolution demolished

MAP 2

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

COUNTRY	U.S. TROOPS
Kuwait	10,000
Qatar	10,000
UAE	5,000
Bahrain	4,700
Jordan	3,000
Iraq	2,000
Saudi Arabia	2,000
Oman	0



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

SOURCES: International Institute for Strategic Studies, *The Military Balance 2023: The Annual Assessment of Global Military Capabilities and Defence Economics* (London: Routledge, 2023), and Heritage Foundation research.

heritage.org

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.[91]

Until the late 1980s, according to USCENTCOM, America's "regional strategy still largely focused on the potential threat of a massive Soviet invasion of Iran."[92] 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.[93] 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 numbered nearly 192,000,[94] 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.[95]

In December 2011, the U.S. officially completed its withdrawal of troops, leaving only 150 personnel attached to the U.S. embassy in Iraq.[96] Later, in the aftermath of IS territorial gains in Iraq, the U.S. redeployed thousands of troops to the country to assist Iraqi forces against IS and help to build Iraqi capabilities.

In 2021, the Biden Administration brought America's combat mission in Iraq to a close and transitioned U.S. forces involvement to an advisory role. U.S. force levels in Iraq declined from 5,200 in 2020 to 2,500 in January 2021.[97] CENTCOM Commander General Frank McKenzie stated that "[a]s we look into the future, any force level adjustment in Iraq is going to be made as a result of consultations with the government of Iraq."[98]

The U.S. 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 the additional deployments of troops, Patriot missile batteries, and combat aircraft to the Gulf in late 2019 to deter Iran, but most were later withdrawn.[99] In August 2022, it was reported that the U.S. State Department had "approved more than $5 billion in arms deals for key Middle East partners, including $3.05 billion in Patriot missiles for Saudi Arabia" to defend itself "against persistent Houthi cross-border unmanned aerial system and ballistic missile attacks on civilian sites and critical infrastructure" and "$2.25 billion in THAAD [Terminal High Altitude Area Defense] systems for the United Arab Emirates."[100]

By January 2022, CENTCOM had deployed an estimated 40,000 to 60,000 U.S. troops in 21 countries within its area of responsibility.[101] Although the exact disposition of U.S. forces is hard to triangulate because of the fluctuating nature of U.S. military operations in the region,[102] information gleaned from open sources reveals the following:

- **Kuwait.** More than 13,500 U.S. personnel are based in Kuwait and 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.[103]

- **United Arab Emirates.** 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), refueling aircraft, and surveillance aircraft. In addition, the United States has regularly deployed F-22 Raptor combat aircraft to Al Dhafra and in April 2021 deployed the F-35 combat aircraft because of escalating tensions with Iran. Patriot and THAAD missile systems are deployed for air and missile defense.[104]

- **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, a March 2019 U.S.–Oman Strategic Framework Agreement "expand[ed] the U.S.–Oman facilities access agreements by allowing U.S. forces to use the ports of Al Duqm, which is large enough to handle U.S. aircraft carriers, and Salalah." In addition, "Oman is trying to expand and modernize its arsenal primarily with purchases from the United States. As of June 2021, the United States ha[d] 72 active cases valued at $2.7 billion with Oman under the government-to-government Foreign Military Sales (FMS) system."[105]

- **Bahrain.** More than 9,000 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. In 2021, Bahrain became an operational hub for the use of new artificial intelligence technology to direct Unmanned Surface Vessels and unmanned underwater vehicles in the CENTCOM area of responsibility.[106]

- **Saudi Arabia.** In June 2021, President Biden reported to Congress that approximately 2,700 U.S. military personnel were deployed in Saudi Arabia "to protect United States forces and interests in the region against hostile action by Iran or Iran-backed groups." The President confirmed that these troops, "operating in coordination with the Government of the Kingdom of Saudi Arabia, provide air and missile defense capabilities and support the operation of United States fighter aircraft."[107] 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.[108]

- **Qatar.** The number of U.S. personnel, mainly from the U.S. Air Force, deployed in Qatar "has ranged from about 8,000 to over 10,000."[109] 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. The recent tensions between Qatar and other Arab states have not affected the United States' relationship with Qatar.

- **Jordan.** According to CENTCOM, "the Jordanian Armed Forces is one of [America's] strongest and most reliable partners in the Levant sub-region."[110] Although there are no U.S. military bases in Jordan, the U.S. has a long history of conducting training exercises out of Jordanian air bases. The Congressional Research Service has reported that "Jordanian air bases have been particularly important for the U.S. conduct of intelligence, surveillance, target acquisition, and reconnaissance (ISR) missions in Syria and Iraq" and that "[a]s of June 2022…approximately 2,833 United States military personnel [were] deployed to Jordan to counter the Islamic State and enhance Jordan's security."[111] In addition:

  Beyond the need to use Jordanian facilities to counter the Islamic State throughout the region, CENTCOM may seek to partner more closely with Jordan in order to position U.S. materiel to counter Iran. In summer 2021, the U.S. Department of Defense announced that

equipment and materiel previously stored at a now-closed U.S. base in Qatar would be moved to Jordan.[112]

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."[113] 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 NATO 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. As of 2020, approximately 1,350 British service personnel were based throughout the region.[114] This number fluctuates with the arrival of visiting warships.

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,[115] and (although such matters are not the subject of public discussion) U.K. attack submarines also 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.[116] 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.[117]

The U.K. also has a small Royal Air Force (RAF) presence in the region, 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 are expected to continue to do so.

Moreover, the British presence in the region is not limited to 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.[118] 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.[119] The French have 700 personnel based in the UAE along with seven Rafale jets and an armored battlegroup, as well as military operations in Iraq, Saudi Arabia, and Qatar.[120] 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 that was formed to combat the Islamic State in Iraq and Syria. As of May 2021, France had between 600 and 650 troops stationed in the UAE; 600 stationed in Jordan, Syria, and Iraq; and 650 stationed in Lebanon.[121] The U.K. temporarily redeployed troops back to the U.K. because of COVID-19 but announced in February 2021 that 500 troops would be sent back along with an additional 3,500 troops to boost its counterterrorism training mission in Iraq.[122] The additional troops will help both to prevent the IS from returning and to 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.[123] 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.[124]

China is also involved in Djibouti and has established its first permanent overseas base there. This base can house 10,000 troops, and Chinese marines have used it to stage live-fire exercises featuring armored combat vehicles and artillery. France, Italy, and Japan also have presences of varying strength in Djibouti.[125]

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."[126]

The condition of the region's roads varies from country to country. All of the roads in Israel, Jordan, and the UAE are paved. Other nations—for example, Oman (60,230 km); Saudi Arabia (221,372 km); and Yemen (71,300 km)—have poor paved road coverage.[127] Rail coverage is also poor. China's Belt and Road Initiative has targeted ports, roads, and railway development in Syria, Iraq, Egypt, and many other countries, and the result could be improved transportation conditions across the region at the expense of U.S. interests.[128]

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 in Kuwait; Al Dhafra and Al Minhad in the UAE; Isa in Bahrain; Eskan Village Air Base in Saudi Arabia; and Muscat, Thumrait, Masirah Island, and the commercial airport at Seeb in 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, Qatar and Oman probably would not allow the U.S. to use air bases in their territory for strikes against Iran unless they were first attacked themselves.

The U.S. also has access to ports in the region, the most important of which may be the deep-water port of Khalifa bin Salman in Bahrain and naval facilities at Fujairah in the UAE.[129] 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.[130]

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, which is large enough to handle U.S. aircraft carriers, and Salalah."[131] 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 the opportunity and risk that these shipping lanes offer to America and her allies. The major shipping routes include:

- **The Suez Canal.** In 2022, more than 22,000 ships transited the Suez Canal—an average of 60 ships per day.[132] 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 for the United States, 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.[133]

  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.[134] These security protocols, however, are not foolproof. In April 2021, the Suez Canal was closed for more than 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.[135]

- **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."[136] In 2020, its daily oil flow averaged "around 18 million barrels" per day, or the equivalent of about "[o]ne fifth of global oil supply."[137]

  Given the extreme narrowness of the passage and its proximity to Iran, shipping routes through the Strait of Hormuz are particularly vulnerable to disruption. Since 2021, Iran has harassed, attacked, and interfered with 15 internationally flagged merchant ships according to the White House and the Pentagon. More recently, in April and May 2023, Iran seized two oil tankers. In response, the U.S. Navy warships stationed in the Persian Gulf increased their patrols.[138] The U.S. needs a naval presence and port access to countries that border the Strait of Hormuz to maintain awareness of Iran's illicit drug and weapons smuggling.[139]

- **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 that are 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.[140]

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, Iran is a formidable regional menace. 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 Iran retains control of powerful Shia militias that it uses to intimidate Iraqi political leaders.[141] Although the regional dispute with Qatar has been resolved, U.S. relations in the region will remain complex and difficult to manage. U.S. military operations, however, continue uninterrupted.

Many of the borders created after World War I are under significant stress. In countries like Iraq, Lebanon, 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. In addition, the China-brokered rapprochement between Iran and Saudi Arabia and Beijing's regionwide infrastructure investments are a warning to U.S. policymakers that neglect of long-standing allies leaves behind power vacuums that America's enemies are only too capable of exploiting to their own advantage.

For decades, the United States has relied on its incomparable ability to project power in response to crises, and many U.S. operations and contingency plans depend on time-phased force deployment from the continental U.S. to operations theaters. This requires secure air and sea lanes of communication as well as secure air and sea bases of debarkation. Neither is assured in a theater conflict as Iran now possesses the ability to threaten three of the region's strategic choke points (the Strait of Hormuz, Bab al-Mandeb, and the Suez Canal) as well as U.S. bases and ports along the Arabian Sea within range of a growing and increasingly accurate Iranian ballistic missile inventory.[142]

Thanks to its decades of military operations in the Middle East, the U.S. has developed tried-and-tested procedures for operating in the region. 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 give the U.S. an opportunity 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 benefit from cooperation with partners and allies in the Middle East when shared interests are threatened.

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:

- **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.

- **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.

- **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.

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

- **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 well placed to defend U.S. interests.

The key regional characteristics consist of:

- **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.

- **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.

- **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 to 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.

- **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.[143]

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 proposed 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			✓		

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Asia

Jeff M. Smith, Bruce Klingner, Michael Cunningham, Bryan Burack, and Andrew J. Harding

Asia has always been vital to the protection and advancement of America's economic and security interests. 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 two centuries since then, the United States government has maintained that allowing any single nation to dominate Asia would be against America's interests. The region is home to too many important markets and 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, the Soviet Union, or China itself.

In the 21st century, Asia's importance to the United States has continued to grow. Asia is a key source of natural resources and plays a crucial role in countless global supply chains. The sea lines of communication that run through the Pacific and Indian Oceans host the vast majority of sea-borne global trade. Today, six of America's top 10 trading partners are found in Asia, including China (third); Japan (fourth); South Korea (sixth); Vietnam (seventh); India (ninth); and Taiwan (tenth).[1] The extent of America's economic integration with Asia and Asian supply chains was demonstrated most starkly by the COVID-19 pandemic as the American economy struggled with import shortages of essential goods including basic pharmaceutical products and key electronics components.

The U.S. also has several key security interests in Asia, including a variety of treaty allies and important security partners. The region has several of the world's largest and most capable militaries, including those of China, India, Japan, Russia, Pakistan, and North and South Korea. Additionally, five Asian states—China, North Korea, India, Pakistan, and Russia—possess nuclear weapons.

The region is a focus of American security concerns for a variety of reasons:

- The region has a notable 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.
- The region is home to America's top external security threat—China.
- The region is characterized by a number of military flashpoints, territorial disputes, and rivalries, including the India–Pakistan dispute over Kashmir, persistent tensions with North Korea, and a wide variety of active territorial disputes between China and its neighbors, including Taiwan, Japan, India, the Philippines, Bhutan, Vietnam, and Indonesia. Lesser territorial disputes also exist between Japan and Russia and between Korea and Japan.

Several of these unresolved differences could devolve into war. Growing Chinese air and sea incursions around Taiwan and indications that General Secretary Xi Jinping has ordered the People's Liberation Army to be prepared for an invasion of the island by 2027 have generated increased concern about the potential for military conflict in the

Taiwan Strait. The situation on the Korean Peninsula remains perpetually tense with Pyongyang expanding its missile arsenal and testing increasingly capable long-range missiles annually. China's growing and increasingly potent naval capabilities, bolstered by a massive "maritime militia," are also generating alarm in Washington and among numerous treaty allies and security partners. Meanwhile, the disputed China–India border has grown considerably more volatile since a series of violent and deadly confrontations in 2020.

Contributing further to instability, the region lacks a robust 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 diplomatic forums like the ASEAN Regional Forum (ARF) and groupings like the ASEAN Defense Ministers Meeting-Plus (ADMM-Plus) constitute the patchwork political architecture.

The Asian security landscape has been marked by a combination of bilateral alliances, mostly centered on the United States, and efforts by individual nations 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; the U.S.–Japan–Australia–India quadrilateral dialogue (popularly known as the Quad); and the new Australia–U.K.–U.S. (AUKUS) agreement.

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 are many trade agreements among the nations of the region and among these nations and countries outside of Asia, most prominently the 15-nation Regional Comprehensive Economic Partnership (RCEP) and 11-nation Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), neither of which includes the U.S. However, there is no counterpart to the European Union or even to the European Economic Community or the European Coal and Steel Community, the precursor to European economic integration.

ASEAN (the Association of Southeast Asian Nations) is a 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). The South Asia Association of Regional Cooperation (SAARC), which includes Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka, has been less effective, both because of the lack of regional economic integration and because of the historical rivalry between India and Pakistan.

Important Alliances and Bilateral Relations in Asia

The keys to a robust U.S. security presence in the Western Pacific are America's alliances with Japan, the Republic of Korea (ROK), the Philippines, Thailand, and Australia. These formal alliances are supplemented by close security relationships with New Zealand and Singapore, an emerging strategic partnership with India, and evolving relationships with Southeast Asian partners like Vietnam, Malaysia, and Indonesia. The U.S. also has a robust unofficial relationship with Taiwan.

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, F-16, and F-35 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, and all three countries have taken delivery of the aircraft. Partners like India and Australia operate American-made P-8 maritime surveillance aircraft and C-17 transport aircraft.

In addition, several "foundational" military agreements with regional partners and allies allow for the sharing of encrypted communications data and equipment, access to each other's military facilities, and the ability to refuel each other's air and naval vessels in theater. In the event of conflict, the region's various air, naval, and even land forces would therefore be able to share information in such key areas as air defense and maritime domain awareness. This advantage is enhanced by the ongoing range of 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.

While it does not constitute a formal alliance, in November 2017, Australia, Japan, India, and the U.S. reconstituted the Quad.[2] 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.[3] 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.[4] In March 2021, the leaders of the four nations held their first virtual summit, marking a new level of interaction.[5] In September 2021, the four leaders held the first in-person Quad summit, which was followed by a second in-person summit in 2022.[6]

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."[7] In effect, this article prohibits the use of force by Japan's governments as an instrument of national policy.

However, Japan's legal interpretation of what is allowed under its peace constitution is not static. It has evolved in response to growing regional threats, Japan's improving military capabilities, and Tokyo's perception of the strength of its alliance with Washington. Japan has gradually adopted missions and deployed weapons that originally were deemed to be unconstitutional.

One such policy was a prohibition against "collective self-defense." For decades, Japan recognized that nations have a right to employ their armed forces to help other states defend themselves (in other words, 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 when Japan passed legislation that enabled its military to exercise collective self-defense in certain cases involving threats to an ally that has come under attack.

Another dramatic shift was Prime Minister Fumio Kishida's decision in December 2022 that Japan would develop long-range missile counterstrike capabilities. Debate about the constitutionality of such capability has raged since 1956 when then-Prime Minister Ichiro Hatoyama assessed that attacking enemy bases could be justified in terms of the right of self-defense. Since then, subsequent Japanese administrations have consistently asserted that Japan has the authority to conduct attacks on enemy targets but chooses not to develop the means to do so.

Citing the escalating Chinese and North Korean missile arsenals, the Kishida administration declared that relying solely on Japanese missile defenses or U.S. strike capabilities to defend against missile threats had become increasingly untenable. Instead, Japan must augment its missile defenses by adding capabilities that would enable it to mount effective counterstrikes against an opponent on its territory to prevent further attacks.

Kishida also broke with long-standing precedent by pledging to raise Japanese defense spending to 2 percent of current gross domestic product (GDP), thereby doubling the self-imposed limit of 1 percent that Tokyo had followed for decades.[8] The Kishida administration emphasized that Japan's rapid and extensive defense buildup required a sustained level of expenditures rather than a temporary increase in spending. Defense spending will be increased to a five-year total of 43 trillion yen ($323 billion) from 2023–2027, and the annual defense budget will be 10 trillion yen ($75 billion), making Japan the world's third-biggest military spender after the United States and China.[9]

Russia's invasion of Ukraine caused a significant shift in the Japanese public's perception of their country's threat environment. The Japanese had been aware of the growing Chinese and North Korean threats, but Vladimir Putin's invasion made clear that their perception of a "post-war world" was an illusion and that large-scale military conflicts

between major powers remained a realistic threat. The Russian invasion of Ukraine crystallized Japanese fears of a possible Chinese conflict in Taiwan and was a wakeup call on the need to augment Japan's military.

Before the war in Ukraine, the Japanese populace had feared that loosening any restrictions on Japan's military risked an inexorable return to the country's militaristic past. The war in Ukraine seemingly caused an overnight sea change in Japanese perceptions. Public opinion polls show strong majorities favoring greater defense spending and a counterstrike capability. Prime Minister Shinzo Abe's 2015 implementation of a policy of collective self-defense led to fierce debates in the national legislature and large public protests. By contrast, the bold security steps announced by the Kishida administration in December 2022 elicited strong public support without sparking any protests.

Despite developing a formidable military force, Japan still relies heavily on the United States—and Washington's extended deterrence guarantee of nuclear, conventional, and missile defense forces—for its security. To strengthen military coordination with the United States, Tokyo has pledged to establish a permanent joint headquarters to unify command of the ground, naval, and air forces.

Currently, the Self-Defense Forces are stovepiped with insufficient ability to communicate, plan, or operate across services. Japan's inability to conduct joint operations across its own military services has inhibited its capacity for combined operations with U.S. forces. By designating a single joint commanding general, Japan will now be able to coordinate more effectively with U.S. Indo-Pacific Command (USINDOPACOM) and its combatant commander. Despite this improvement, however, the separate and parallel command structure that Japan and the United States will continue to have is a major shortcoming compared with the integrated command relationship that the U.S. military has with South Korea or NATO allies.

As part of its military relationship with Japan, the United States maintains "approximately 54,000 military personnel" and 8,000 Department of Defense (DOD) civilian and contractor employees in Japan under the rubric of U.S. Forces Japan (USFJ).[10] 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 to include joint amphibious exercises as well as air and naval exercises.

The American presence is supported by a substantial American defense infrastructure throughout Japan, including Okinawa. These 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 for the monitoring of Russian, Chinese, and North Korean military operations. This capability is supplemented by Japan's growing array of space systems, including new reconnaissance satellites.

During bilateral Special Measures Agreement negotiations, the Trump Administration sought a 400 percent increase in Japanese contributions for renumeration above the cost of stationing U.S. troops in Japan. Late in 2021, Japan's *Asahi Shimbun* reported that Japan had agreed to "ramp up its annual host-nation support for U.S. forces stationed in Japan." Specifically:

> Under the agreement, Japan's yearly contribution to host U.S. bases will total 1,055.1 billion yen ($9.2 billion) for the five-year period from fiscal 2022 through fiscal 2026. This translates into an annual average payment of about 211 billion yen, nearly 10 billion yen more than the 201.7 billion yen Japan pays under the program for the current fiscal year....
>
> Under the new agreement, Japan's funding for facilities within U.S. bases, such as bomb shelters to protect aircraft, will increase, while Japan's outlays for utilities costs will be reduced gradually in five years to 13.3 billion yen from 23.4 billion yen for the current fiscal year. This indicates a shift in the focus of the program from financing running costs for U.S. forces to bolstering operational capabilities.[11]

In January 2022, the U.S. Department of Defense stated that U.S. and Japanese officials had

"reaffirmed that the total amount of Japan's Facilities Improvement Program (FIP) funding will be 164.1 billion yen to fund prioritized projects, subject to the completion of all necessary procedures for such budget request...."[12]

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. However, in recent years, Tokyo has become increasingly alarmed by China's surging defense expenditures, rapidly expanding and modernizing military capabilities, and escalating aerial and maritime incursions into Japan's territorial waters and contiguous areas. In response, Japan has reoriented its forces so that they can better counter the Chinese threat to its remote southwest islands. It also has acquired new capabilities, built new facilities, deployed new units and augmented others, improved its amphibious warfare capabilities, increased its air and sea mobility, and enhanced its command-and-control capabilities for joint and integrated operations.[13]

Recently, the growing potential for a Taiwan crisis has led senior Japanese officials to issue increasingly bold public statements of support for Taipei and align Japan's national interests more directly with the protection of Taiwan's security. However, there have been no declared policy changes, and Japan has not pledged to intervene directly in a military conflict to defend Taiwan or even to allow U.S. defense of Taiwan from bases in Japan.

Contentious historical issues from Japan's brutal 1910–1945 occupation of the Korean Peninsula 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 reparations for forced labor.[14] In December 2018, an incident between a South Korean naval ship and a 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.[15] 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.

In March 2023, President Yoon Suk Youl, who had been elected to succeed Moon in March 2022, took a bold and politically risky step to improve bilateral relations with Japan by announcing that Korean rather than Japanese companies would provide compensation to Korean forced labor victims. Yoon's decision led to the cancellation of Japanese export restrictions, progress toward enhancing economic trade, and discussion on expanding military cooperation toward the common North Korean threat. Yoon's decision, however, was criticized by a majority of South Koreans, indicating a lack of support that could hinder further security enhancements.

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.[16]

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 seven bases in Japan to support U.N. forces in Korea.

Although the 1953 armistice ended the Korean War, UNC retained operational control (OPCON) of South Korean forces until 1978, when it was transferred to the newly established 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. CFC returned peacetime operational control of South Korean forces to Seoul in 1994. If

war became imminent, South Korean forces would become subordinate to the CFC commander, who in turn remains subordinate to both countries' national command authorities.

In 2007, then-President Roh Moo-hyun requested that the United States return wartime OPCON of South Korean forces to Seoul. Under the plan, the CFC commander would be a South Korean general with a U.S. general as deputy commander. The U.S. general would continue to serve as commander of UNC and U.S. Forces Korea (USFK). The CFC commander, regardless of nationality, would always remain under the direction and guidance of U.S. and South Korean political and military national command authorities.

This decision engendered significant opposition within South Korea and raised serious military questions about the transfer's impact on unity of command. Late in 2014, Washington and Seoul agreed to postpone the scheduled wartime OPCON transfer and instead adopted a conditions-based rather than timeline-based policy.

President Moon Jae-in advocated for an expedited OPCON transition during his administration, but critical conditions, including improvement in South Korean forces and a decrease in North Korea's nuclear program, had not been met.[17] Moon's successor, Yoon Suk Youl, criticized his push for a premature return of wartime OPCON before Seoul had fulfilled the agreed-upon conditions.

South Korea has fought alongside the United States in nearly every significant conflict since the Korean War. Seoul sent 300,000 troops to the Vietnam War, and 5,000 of them 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. In spite of its support for multinational crisis response, however, South Korea's defense planning is 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.

In response to Pyongyang's expanding nuclear strike force, South Korea created a "Three Axis" tiered defense strategy comprised of Kill Chain (preemptive attack); the Korea Air and Missile Defense (KAMD) system; and the Korea Massive Punishment and Retaliation (KMPR) system. The South Korean military is a sizeable force with advanced weapons and innovative military education and training. South Korean military spending has increased, and Seoul appears to be procuring the right mix of capabilities. U.S.–South Korean interoperability has improved, partly because of continued purchases of U.S. weapons systems.

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 from North Korea so that few Americans are now deployed on the Demilitarized Zone (DMZ).

Traditionally, U.S. military forces regularly engaged 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 U.S. forces to the Korean Peninsula. However, after the 2018 U.S.–North Korean Summit, President Donald Trump announced that he was unilaterally cancelling major bilateral military exercises with South Korea, dismissing them as "very provocative," "ridiculous," "unnecessary," and a "total waste of money."[18] The President made his decision without consulting the DOD, U.S. Forces Korea, or allies South Korea and Japan. During the next four years, the U.S. and South Korea cancelled numerous large-scale exercises and reduced the "size, scope, volume, and timing" of other allied military exercises in South Korea without any change in North Korean military activity[19] or any reciprocal diplomatic gesture in return for the unilateral U.S. concession.

In 2022, South Korean President Yoon and American President Joe Biden agreed to expand the scope and scale of bilateral combined military exercises to repair the degradation of allied deterrence and defense capabilities since 2018. Biden also agreed to resume the rotational deployment of U.S. strategic assets—bombers, aircraft carriers, and dual-capable aircraft—to the Korean Peninsula that Trump had also cancelled in 2018.[20]

In late 2022, Washington and Seoul conducted wide-ranging air, naval, and ground maneuvers on and near the Korean Peninsula. The U.S., South Korea, and Japan also resumed trilateral military

exercises after a five-year hiatus. The three countries engaged in anti-submarine and ballistic missile exercises to enhance security coordination against the common North Korean threat. To capitalize on this positive momentum, Washington and Seoul announced that in 2023, they would conduct at least 20 combined training programs commensurate in size to the large-scale Foal Eagle field training exercises of the past.[21] The Freedom/Warrior Shield exercises in March 2023 were the largest and longest drills in at least five years.

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.[22] In February 2019, South Korea offered to increase its share of the cost by approximately 8 percent to about $920 million.[23] President Trump first demanded "cost plus 50 percent"[24] and then 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, thereby defusing tensions within the alliance.[25]

South Korea spends 2.6 percent of its gross domestic product (GDP) on defense—more than is spent by any European ally except Poland.[26] Seoul absorbs costs not covered in the cost-sharing agreement, including 91 percent ($10.7 billion) of the cost of constructing Camp Humphreys, the largest U.S. base on foreign soil.[27]

The Philippines. In addition to being America's longest-standing defense ally in Asia, the Philippines shares a uniquely close and complex relationship with the United States. After more than 300 years of colonial rule, Spain ceded the Philippines to the United States at the conclusion of the Spanish–American War in 1898. Over the next four decades, the United States gradually established democratic institutions and provided for increased autonomy, which culminated in full independence in 1946.

During this period, the United States and Filipinos first fought against each other in the Philippine–American war and in other resistance to colonial government and then alongside each other in World War II. The bond forged between the two peoples has persisted into the 21st century. Recent polls show that 80 percent of Filipinos view the United States favorably—a greater share than is reported by some other U.S. defense treaty allies in the Indo-Pacific.[28]

The United States and the Philippines signed a Mutual Defense Treaty (MDT) in 1951. For much of the period between 1898 and the end of the Cold War, the Philippines was home to the largest American bases in the Pacific, centered on the U.S. Navy base in Subic Bay and the complex of airfields that developed around Clark Field (later Clark Air Base), where unparalleled base infrastructure provided replenishment and repair facilities and substantially extended deployment periods throughout the East Asian littoral.

These bases, simultaneously controversial reminders of the colonial era and generators of economic activity, provided for substantial lease payments to the Philippines government. In 1991, the United States decided to abandon Clark Air Base after significant damage from a volcanic eruption[29] and offered the Philippines a reduced payment for the continued use of Subic alone.[30] The Philippines rejected the offer, thereby compelling the closure of U.S. Naval Base Subic Bay.[31]

Despite the base closures, 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.[32]

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.[33]

U.S.–Philippine defense cooperation underwent a period of instability beginning in February 2020 when the sitting Philippine President announced a decision to abrogate the 1998 U.S.–Philippines Visiting Forces Agreement (VFA). An instrument of the MDT, the VFA specifies the procedures governing the deployment of U.S. forces and equipment

to the Philippines and governs the application of domestic Philippine law to U.S. personnel, which is the most substantive part of the VFA and historically the most controversial. During this period, the VFA operated on successive six-month extensions until the Philippines retracted its intention to terminate the agreement in July 2021.[34] Preservation of the VFA underpins extensive joint military activities, which reportedly will include "more than 500 activities together throughout [2023]."[35]

In another sign of strengthening U.S.–Philippine defense ties, in April 2023, the two countries designated additional sites under the Enhanced Defense Cooperation Agreement (EDCA). The EDCA, signed in 2014, authorizes the rotational deployment of U.S. forces and prepositioning of materiel at agreed locations in the Philippines for security cooperation, joint training, and humanitarian assistance and disaster relief.[36] The four new sites brought the total of agreed locations to nine. Two of the newly announced locations are adjacent to the South China Sea, and two are located in areas of the Philippines that are geographically near Taiwan.[37]

The U.S. government has long made it clear that any attack on Philippine ships or aircraft or on the Philippine armed forces—for example, by China—would be covered under the U.S.–Philippine Mutual Defense Treaty and would obligate the United States, consistent with its constitutional procedures, to come to the defense of the Philippines.[38] In February 2023, Secretary of Defense Lloyd Austin reaffirmed this commitment, specifying that such an attack anywhere in the South China Sea would invoke U.S. mutual defense commitments.[39]

Thailand. The U.S.–Thai defense alliance is built on the 1954 Manila Pact, which established the now-defunct SEATO, and the 1962 Thanat–Rusk agreement.[40] These were supplemented by the Joint Vision Statements for the Thai–U.S. Defense Alliance of 2012 and 2020.[41] 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 part of America's network of alliances in Asia. During the Vietnam War, U.S. 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, which were initiated in 1982. This collaboration builds on a partnership that began with the dispatch of Thai forces to the Korean War, during which Thailand's approximately 12,000 troops suffered more than 1,200 casualties.[42] The Cobra Gold exercise is the world's longest-running international military exercise[43] and one of its largest. The most recent, in 2023, involved more than 6,000 U.S. personnel and featured, in addition to co-host Thailand,[44] "full participation from the Republic of Indonesia, Republic of Korea, Republic of Singapore, Japan and Malaysia, as well as other limited participants, planners and observers from more than 20 additional nations."[45] In past years, a small number of Chinese personnel also participated.

While U.S.–Thai security cooperation remains strong, U.S. relations with Thailand overall have faced both persistent strain and acute crises in recent years that are idiosyncratic among U.S. treaty allies. Military coups in 2006 and 2014 limited military-to-military relations for more than a decade. This was due partly to standing U.S. law prohibiting assistance to regimes that result from coups against democratically elected governments and partly to policy choices by the U.S. government.

In 2017, Thailand adopted a junta-drafted constitution that institutionalized elements of military rule. Nonetheless, the United States welcomed Thailand's first general elections under this constitution in 2019 as "positive signs for a return to a democratic government that reflects the will of the people."[46] Bilateral military engagement has since rebounded with high-level engagement and arms transfers to the Thai military of major systems like Stryker armored vehicles and Black Hawk helicopters. Under the Biden Administration, this trend may lead to the sale of the F-35.[47]

Thailand is the only Southeast Asian country that was never colonized and has long pursued a hedging strategy that seeks to maintain good relations among competing powers.[48] In the post–Cold War era, this tradition has contributed to Thailand's geopolitical drift away from the U.S. and toward China—a trend that has been further encouraged by the suppression of democratic institutions in Thailand, resulting tensions in U.S.–Thai bilateral

relations, China's amenability to anti-democratic regimes, and expanding Chinese–Thai economic relations. The U.S. and Thailand have differing threat perceptions concerning China, and this has undermined the U.S.–Thai alliance's clarity of purpose.

Relations between the Thai and Chinese militaries have improved steadily over the years. 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.[49] The Thais conduct more bilateral exercises with the Chinese than are conducted by any other military in Southeast Asia.[50]

Thailand has also purchased Chinese military equipment for many years. Purchases in recent years have included significant buys of battle tanks and armored personnel carriers.[51] According to the Stockholm International Peace Research Institute (SIPRI), from 2006 to 2022, China was a significantly bigger supplier than the U.S.[52] These deals, however, have not been without difficulty. Thailand's acquisition of submarines, for example, has been stalled first by a combination of budget restraints, the priority of COVID-19 response, and public protest[53] and more recently by Germany's refusal to allow export of the engines that the boats require.[54] Submarines could be particularly critical to Sino–Thai relations because their attendant training and maintenance would require a greater Chinese military presence at Thai military facilities.

Federated States of Micronesia, Republic of the Marshall Islands, and Republic of Palau. The Federated States of Micronesia (FSM), Republic of the Marshall Islands (RMI), and Republic of Palau[55] enjoy a unique defense partnership with the United States. During World War II, the Pacific Islands were vitally important as the U.S. fought to gain a foothold in the Pacific theater in its campaign against Imperial Japan. After World War II, the Trust Territory of the Pacific Islands was administered by the U.S. and often used for nuclear testing, most notably the 1954 Castle Bravo test, which involved the largest U.S. bomb ever tested, at Bikini Atoll in the Marshall Islands.[56] As the FSM, RMI, and Palau gained independence, they elected to enter a special association with the United States.

About every 20 years, each of the Freely Associated States (FAS) negotiates a renewal of the Compact of Free Association (COFA) with the U.S. that governs its defense, economic, and immigration affairs. The COFA agreements are strategically important for two primary reasons.

First, they grant the U.S. absolute control of all FAS defense matters. The U.S. exclusively operates armed forces and bases throughout the FAS while being responsible for their protection. Some restrictions apply: The U.S. cannot use weapons of mass destruction in Palauan territory and can store them in the FSM or RMI only during war or emergency.[57] Notably, COFA citizens serve in the U.S. armed forces.

Second, the U.S. has the right of strategic denial. Strategic denial allows the U.S. to determine unilaterally which militaries are authorized to enter FAS territories.[58] As China's influence and operations throughout the Pacific Islands grow, including recently in the Solomon Islands, the right to strategic denial becomes increasingly important.[59]

The current COFA agreements with the FSM and RMI expire on September 30, 2023, and with Palau on September 30, 2024. In 2003, the U.S. provided $3.5 billion in funding to the FSM and RMI.[60] The Biden Administration's FY 2024 budget request includes $7.1 billion over 20 years for the renewal of COFA agreements for all three FAS.[61] Renewal is essential for maintaining U.S. power projection and operational flexibility in the Pacific.[62]

All FAS have a "shiprider" agreement that allows U.S. Coast Guard (USCG) personnel and law enforcement to work with local maritime law enforcement to protect regional resources.[63] The USCG opened the Commander Carlton S. Skinner Building, located at USCG Forces Micronesia/Sector Guam, in 2022.[64] In 2021, former FSM President David Panuelo, USINDOPACOM Commander Admiral John C. Aquilino, and U.S. Ambassador to the FSM Carmen G. Cantor had reached an agreement to build a new military base in the FSM.[65] The RMI hosts the U.S. Army Garrison Kwajalein Atoll, which is the country's second-largest employer, and the Ronald Reagan Ballistic Missile Defense Test Site.[66] In 2012, the Marshall Islands Sea Patrol christened the LOMOR II for maritime inspections and rapid response operations with the support of Japan, Australia, and the United States.[67]

With about 500 Palauans serving in the U.S. armed forces, Palau has a higher volunteer rate per capita than any U.S. state.[68] In 2020, Palau requested that the Pentagon build permanent military

MAP 3

Strategic Significance of the Compact of Free Association States

Being as close as 1,500 miles away from Taiwan, the Freely Associated States (FAS) can serve as an important staging ground for U.S. armed forces in the Indo-Pacific. Through the COFA agreements, the U.S. also can deny other countries military access to the FAS without explicit authorization.

NOTE: Distances are approximate.
SOURCE: Heritage Foundation research.

heritage.org

bases,[69] and a $118 million foundational installation to support the Tactical Mobile Over-the-Horizon Rader is expected to be operational by 2026[70] with one site along the northern isthmus of Babeldaob and another on Angaur.[71] In 2020, the 17th Field Artillery Brigade maneuvered from Guam to Palau as part of the Defense Pacific 20 exercise with a High Mobility Artillery Rocket System.[72] In 2021, Secretary of Defense Austin hosted Palauan President Surangel Whipps Jr. to discuss defense-related matters.[73] The 1st Air Defense Artillery Battalion, based out of Okinawa, held its first Patriot live-fire exercise in Palau in 2022.[74]

Australia. Australia is one of America's most important Indo-Pacific allies. 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. They deepened during World War II when, after Japan commenced hostilities in the Western Pacific, Australian forces committed to the North Africa campaign. 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.

Today, the two nations' chief defense and foreign policy officials meet annually (most recently in December 2022) 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.[75] Australia also has long 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,"[76] and naval communications facilities on the North West Cape of Australia.[77]

In 2011, U.S. access was expanded with the U.S. Force Posture Initiatives (USFPI), which included Marine Rotational Force–Darwin and Enhanced Air Cooperation. The rotation of as many as 2,500 U.S. Marines for a set of six-month exercises near Darwin began in 2012. The current rotation is comprised of 2,500 Marines that participate in multiple live fire and joint exercises.[78] In the past, these forces have deployed with assets that include a MV-22 Osprey squadron, UH-1Y Venom utility and AH-1Z Viper attack helicopters, and RQ-21A Blackjack drones.

The USFPI's Enhanced Air Cooperation component began in 2017, building on preexisting schedules of activity. New activities include "fifth generation integration, aircraft maintenance integration, aeromedical evacuation (AME) integration, refueling certification, and combined technical skills and logistics training."[79] Enhanced Air Cooperation has been accompanied by the buildout of related infrastructure at Australian bases, including a massive fuel storage facility in Darwin.[80] Other improvements are underway at training areas and ranges in Australia's Northern Territories.[81]

In 2021, the U.S., Australia, and the U.K., which already enjoyed close security cooperation, inaugurated a new Australia–United Kingdom–United States partnership (AUKUS) initiative. A key component of this initiative is support for Australia's acquisition of "a conventionally armed, nuclear powered submarine capability at the earliest possible date, while upholding the highest non-proliferation standards."[82] Among other things, the partnership also focuses on improving cooperation in undersea robotic autonomous systems, quantum technologies, artificial intelligence, and hypersonic capabilities.[83]

On March 13, 2023, the AUKUS partners announced an arrangement under which Australia will acquire nuclear submarines, to be known as SSN-AUKUS, featuring U.K. submarine design and advanced U.S. technology. Both Australia and the U.K. will deploy SSN-AUKUS and intend to begin domestic production before 2030. The U.K. plans to deliver its first SSN-AUKUS in the late 2030s, and Australia plans to deliver its first submarine in the early 2040s. The U.S. intends to sell three and as many as five *Virginia*–class submarines to Australia in the early 2030s. The agreement also includes increases in funding, training, port and personnel visits, rotations, and infrastructure projects.[84] Although maintaining political support for the decades-long commitments may prove challenging, the envisioned pathway should unleash a new era of AUKUS partnership and security in the Indo-Pacific.

This new cutting-edge cooperation under the USFPI and AUKUS comes on top of long-standing joint U.S.–Australia training, the most prominent

example of which is Talisman Saber, a series of biannual exercises that involve U.S. Army, Navy, Air Force, and Marines as well as almost two-dozen ships, multiple civilian agencies, and participants embedded from other partner countries.[85] COVID forced the 2021 iteration to downsize, but the 2019 version included more than 34,000 personnel from the U.S. and Australia. The 2023 exercise is scheduled for July 21 to August 4, 2023.[86]

In April 2023, the government of Prime Minister Anthony Albanese released a *Defence Strategic Review* billed as "the most ambitious review of Defence's posture and structure since the Second World War."[87] The review assesses that the U.S. is no longer the "unipolar leader of the Indo-Pacific" and recommends that Australia adopt a strategy of denial with a focused force structure that prioritizes the "most significant military risks."[88] China's strategic intentions, demonstrated by its military buildups and provocative actions in the South China Sea and Pacific Islands, are assessed as likely to have a negative impact on Australian interests.[89] The Albanese government either agreed or agreed in-principle to adopt or implement all of the review's 62 recommendations.[90]

Singapore. Singapore is America's closest non-ally partner in the Western Pacific. The agreements that support this security relationship are the 2015 U.S.–Singapore Enhanced Defense Cooperation Agreement (DCA),[91] 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.[92]

Pursuant to these agreements and other understandings, Singapore hosts U.S. naval ships and aircraft as well as Logistics Group Western Pacific, principal logistics command unit for the U.S. Seventh Fleet.[93] U.S. Navy P-8 Poseidon maritime patrol aircraft began rotational deployments to Singapore in 2015,[94] and Littoral Combat Ships have deployed to Singapore since 2016.[95] The U.S. Air Force began rotational deployments of RQ-4 Global Hawk unmanned aircraft to Singapore in 2023.[96] Notably, the Changi Naval Base is capable of hosting U.S. aircraft carriers, which visit regularly with the USS *Nimitz* conducting the most recent port call in January 2023.[97]

According to the U.S. Department of State, "[t]he United States has $8.38 billion in active government-to-government sales cases with Singapore under the Foreign Military Sales (FMS) system" and "[f]rom 2019 through 2021...authorized the permanent export of over $26.3 billion in defense articles to Singapore via Direct Commercial Sales (DCS)."[98] In addition, "more than 1,000 Singaporean military personnel participate in training, exercises, and Professional Military Education in the United States," and "Singapore has operated advanced fighter jet detachments in the continental United States for 27 years."[99]

In January 2020, it was announced that Singapore had been "formally approved to become the next customer of the F-35 Joint Strike Fighter, paving the way for a future sale."[100] Like others of its assets, the four F-35s were to be housed at training facilities in the U.S.[101] and perhaps on Guam under an agreement reached in 2019.[102] In February 2023, it was reported that "Singapore will exercise a contractual option to acquire eight more F-35B fighter jets, bringing its fleet to 12 aircraft that manufacturer Lockheed Martin will deliver by the end of the decade."[103]

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, New Zealand was suspended from the 1951 ANZUS treaty for pursuing a "nuclear free zone" and barring nuclear-powered vessels from entering its 12-nautical-mile territorial sea. In 2012 the ban on visits by U.S. nuclear-powered naval vessels was lifted.[104]

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.[105] 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,[106] 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.[107] At the time of the visit in

November 2016, both sides claimed to have satisfied their respective legal requirements.[108] Prime Minister John Key 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 a relief response to the Kaikoura earthquake. Since then, there have been several other ship visits by the U.S. Coast Guard. In 2017, New Zealand lent one of 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.[109] In November 2021, the guided-missile destroyer USS *Howard* made a port call in New Zealand.[110]

New Zealand is a member of the elite Five Eyes intelligence alliance with the U.S., Canada, Australia, and the U.K.[111] After a period of record attrition in the New Zealand Defence Force that led to the idling of three naval vessels and early retirement of the country's P-3 Orion fleet, New Zealand is reportedly considering "the possibility of...becoming a non-nuclear partner of AUKUS" and increasing overall resources allocated to defense.[112]

Taiwan. When the United States shifted its recognition of the government of China from the Republic of China (Taiwan) to the People's Republic of China (PRC), 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."[113]

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 U.S. policy "to provide Taiwan with arms of a defensive character."[114] 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."[115] The U.S. has implemented these provisions of the act 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"[116] 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."[117] 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.[118]

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 hearings held by the Senate Committee on Foreign Relations and the House Committee on Foreign Affairs in August 1982.[119] 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.*[120]

Although the United States sells Taiwan a variety of military equipment, provides limited training to Taiwanese military personnel, and sends observers to Taiwan's major annual exercises, it does not engage in joint exercises with Taiwan's armed forces. Some Taiwan military officers attend professional military education institutions in the United States, and there 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, in late 2021, after reports of an uptick in the number of U.S. military advisers in Taiwan, Taiwan's President Tsai Ing-wen acknowledged their presence going back at least to 2008.[121] The numbers involved are in the dozens but are likely to increase to between 100 and 200 by the end of 2023 according to media reports.[122] Most of these personnel will continue to be focused on training Taiwanese soldiers to use U.S.-sourced military equipment and to carry out military maneuvers with a view to defending Taiwan against a hypothetical attack by China.

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, which is intended to improve the security capacity of U.S. partners, and

- The Pacific Deterrence Initiative (PDI), which bolsters America's military presence and makes it more accountable.

Among the most important of the bilateral partnerships in this effort, beyond those listed previously, 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.

After decades without diplomatic relations following the Vietnam War, improvements in bilateral relations in recent years have led to Vietnam's emergence as a nascent U.S. security partner. Relations have been bolstered by U.S. efforts to assist Vietnam in mitigating continued dangers from Vietnam War–era unexploded ordnance (UXO) as well as bilateral efforts to address other war legacy issues. Since 1993, for example, "the U.S. government [has] contributed more than $206 million for UXO efforts," and "UXO assistance continues to be a foundational element of U.S.–Vietnam relations."[123]

Since the normalization of diplomatic relations between the two countries in 1995, the U.S. and Vietnam also have gradually normalized their defense relationship, codified in 2011 with a Memorandum of Understanding (MOU) Advancing Bilateral Defense Cooperation.[124] In 2015, the MOU was updated by the Joint Vision Statement on Defense Cooperation, which includes references to such issues as "defense technology exchange"[125] 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.[126] According to USINDOPACOM's 2022 command posture statement, the U.S. and Vietnam "are expected to sign a three-year Defense Cooperation Plan of Action for 2022–2024 and an updated Defense MOU Annex codifying new cooperation areas, including defense trade, pilot training, cyber, and personnel accounting (POW/MIA)."[127]

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; ties between the Communist Party of Vietnam (CPV) and Chinese Communist Party (CCP); and a Vietnamese foreign policy that seeks to balance relationships with all major powers. The most significant development with respect to security ties over the past several years has been 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 has not changed 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 three decommissioned *Hamilton*–class cutters and 24 Metal Shark patrol boats as well as infrastructure support.[128] Vietnam is scheduled to take delivery of six Insitu[129] ScanEagle unmanned aerial system (UAS) drones for its Coast Guard.[130] The U.S. is also providing T-6 turboprop trainer aircraft.[131] 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 U.S.–Vietnam 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.[132] 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. It did not participate in the exercise in 2020, when it was scaled down because of COVID-19,[133] or in 2022.

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.[134] In July 2022, a potential third carrier visit, this time by the USS *Ronald Reagan*, was cancelled.[135] 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 have included Malaysian assistance in the reconstruction of Afghanistan and involvement in antipiracy operations "near the Malacca Strait and, as part of the international anti-piracy coalition, 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."[136] 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 cooperation on counterterrorism, 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.[137]

Malaysia has also been upgrading its fleet of fighter aircraft. In February 2023, Malaysia awarded a $920 million contract to Korea Aerospace Industries for 18 FA-50 light attack aircraft, the first of which is to be delivered in 2026.[138]

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. has also worked closely with Indonesia's defense establishment to reform Indonesia's strategic defense planning processes.

U.S.–Indonesia military cooperation is governed by the 2010 Framework Arrangement on Cooperative Activities in the Field of Defense and the 2015 Joint Statement on Comprehensive Defense Cooperation[139] 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."[140]

In 2021, the agreements framed new progress in the relationship that included breaking ground on a new coast guard training base,[141] inauguration of a new Strategic Dialogue,[142] and the largest-ever

U.S.–Indonesia army exercise.[143] In 2022, this exercise, Garuda Shield, involved "more than 4,000 combined forces from 14 countries."[144] As of March 2021, the U.S. "ha[d] $1.88 billion in active government-to-government sales cases with Indonesia under the Foreign Military Sales (FMS) system."[145] In February 2022, the U.S. agreed to sell Indonesia "up to 36" F-15s and related equipment and munitions worth $14 billion.[146] During a visit by Defense Secretary Lloyd Austin to Jakarta in November 2022, Indonesian Defense Minister Prabowo Subianto said that Indonesia "is on the verge of making a decision about buying" the jets[147] and that the deal was in "advanced stages."[148]

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 that would endure for 20 years.

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.[149] 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 would not allow al-Qaeda or any other transnational terrorist group to use Afghan soil.[150] 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.

In April 2021, President 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."[151] 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. During the Taliban offensive, President Ghani fled the country for the United Arab Emirates (UAE), and the Afghan security forces largely abandoned their posts.[152]

Having vacated the Air Force base at Bagram in July, 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. IS-K, the local branch of ISIS, claimed responsibility for the attack, and the Biden Administration subsequently launched drone strikes on two IS-K targets.[153]

The last U.S. forces were withdrawn on August 30, 2021, and the Taliban soon formed a new government comprised almost entirely of hard-line elements of the Taliban and Haqqani Network, including several individuals on the U.S. government's Specially Designated Global Terrorists list.[154] Sirajuddin Haqqani, arguably the most powerful figure in the new Afghan government, carries a $10 million U.S. bounty for his organization's involvement in countless terrorist attacks.[155]

Since seizing power, the Taliban government has hunted down and executed hundreds of former government officials and members of the Afghan security forces. It also has cracked down on Afghanistan's free press, banned education for girls beyond sixth grade while the daughters of several Taliban leaders attend school in Pakistan and the UAE, and curtailed the rights of women and minorities. Under Taliban rule, the Afghan economy has collapsed. The World Bank estimates that GDP contracted by 30 percent–35 percent between 2021 and 2022,[156] and the U.N. World Food Programme has said that Afghanistan is at risk of famine without hundreds of millions of dollars in food aid.[157]

Like most of the world's other governments, the U.S. government has refused to offer the new Taliban government diplomatic recognition. In October 2021, Under Secretary of Defense for Policy Colin Kahl admitted that both al-Qaeda and ISIS-K (the

local branch of the Islamic State) were operating in Afghanistan with the intent to conduct terrorist attacks abroad, including against the U.S. Specifically, Kahl estimated that "[w]e could see ISIS-K generate that capability in somewhere between 6 or 12 months" and that "Al Qaeda would take a year or two to reconstitute that capability."[158]

In August 2022, a U.S. drone strike killed al-Qaeda leader Ayman al Zawahari, who was discovered residing in a safehouse in Kabul.[159] The U.S. government claimed the operation was the result of "careful, patient and persistent work by counterterrorism professionals" and claimed the Taliban had violated its agreement with the U.S., struck at Doha, in which it pledged not to host al-Qaeda and other international terrorist groups.[160]

The Taliban–Haqqani government has faced an ongoing wave of attacks, violence, and assassinations from ISIS-K. Since its emergence around 2015, the Islamist extremist group has been competing with the Taliban–Haqqani Network alliance for territory and recruits. Meanwhile, the Pakistani Taliban, allies of the Afghan Taliban and Haqqani Network, have escalated attacks against neighboring Pakistan since the withdrawal of U.S. forces from Afghanistan.

Pakistan. After decades of tactical collaboration during the Cold War, Pakistan and the U.S. developed an often troubled relationship after the U.S. invasion of Afghanistan. During the early stages of the war, 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. Those amounts progressively decreased as the U.S. and allied troop presence decreased.

By the late 2000s, tensions emerged in the relationship over accusations by U.S. analysts and officials that Pakistan was providing a safe haven to the Taliban and its allies as they intensified their insurgency in Afghanistan. The Taliban's leadership council (shura) was located in Quetta, the capital of Pakistan's Baluchistan province. U.S.–Pakistan relations, already tense, suffered an acrimonious rupture in 2011 when U.S. special forces conducted a raid on Osama bin Laden's hideout in Abbottabad less than a mile from a prominent Pakistani military academy.[161] Relations deteriorated further in 2017 when President 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."[162]

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 with known links to Pakistan's Inter-Services Intelligence Agency.[163] In addition to suspending aid, the Trump Administration supported both Pakistan's addition to the Financial Action Task Force (FATF) list of Jurisdictions Under Increased Monitoring ("grey list") for failing to fulfill its obligations to prevent the financing of terrorism and its designation as a "Countr[y] 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.'"[164] In October 2022, Pakistan was removed from the grey list because of its reportedly improved efforts against "money laundering, terrorist financing, and...armed groups and individuals."[165]

Despite harboring and supporting a variety of known terrorist groups that operate in Afghanistan and Kashmir, Pakistan has been subject to terrorism from anti-state extremist groups, including the Pakistani Taliban (TTP). In the late 2000s and early 2010s, the TTP engaged in a bloody campaign of terrorism against the Pakistani state; from 2008–2013, approximately 2,000 civilians were killed in terrorist attacks each year. The Pakistan military launched a series of operations against these groups in 2014 and succeeded in progressively reducing terrorist violence in the years that followed.[166]

However, after the Afghan Taliban assumed power in Kabul, the number of attacks on Pakistan civilian and military targets spiked dramatically.[167] Islamabad has repeatedly accused the Taliban government in Kabul of harboring the TPP and ISIS-K—the two groups that took credit for most of these attacks—or failing to rein in their activities. Tensions reached a tipping point in April 2022 when the Taliban accused Pakistan of launching cross-border raids into Afghanistan to target these groups and causing dozens of civilian casualties in

the process.[168] The Pakistani government's peace negotiations with the TTP have produced a cycle of temporary cease-fires punctuated by cycles of violence and terrorism against civilians and Pakistani security personnel. Pakistan claims the Taliban-led government in Kabul is either collaborating with the Pakistani Taliban or tacitly permitting them to use Afghan soil to launch attacks inside Pakistan.

Pakistan–U.S. relations improved modestly from 2018–2021 as Pakistan involved itself in bringing the Afghan Taliban to the negotiating table in Doha. However, relations have remained generally strained since the U.S. withdrawal from Afghanistan. President Biden reportedly has refused to engage in direct communications with Prime Minister Imran Khan, and Pakistan declined an invitation to attend President Biden's December 2021 Summit for Democracy. Deputy Secretary of State Wendy Sherman visited Pakistan in October 2021 to discuss "the importance of holding the Taliban accountable to the commitments they have made." Days earlier, she noted: "We don't see ourselves building a broad relationship with Pakistan. And we have no interest in returning to the days of hyphenated India–Pakistan."[169]

Pakistan also has been beset by simultaneous economic, political, and security crises in recent years. Prime Minister Khan was ousted from power in April 2022 after losing a no-confidence vote in parliament and was later barred from running for office for five years based on charges that he insists are politically motivated. Khan's supporters have repeatedly taken to the streets, and Khan has been calling for new parliamentary elections ever since the 2022 by-elections in which his PTI political party performed well. In May 2023, Khan was arrested on corruption charges, and widespread protests ensued.[170] Unusually, protesters targeted military facilities and personnel, even raiding the homes of senior military commanders.[171] However, by month's end, Khan was released, the protests abated, and several members of his political party defected.[172] New national elections are due to be held in October 2023.[173]

Pakistan's economy is teetering on the verge of collapse with skyrocketing inflation and dwindling foreign exchange reserves. These problems were made even worse by devastating floods in 2022 that killed thousands and affected millions. The Pakistani government is seeking billions of dollars in aid simply to meet its growing debt obligations but has found multilateral lenders like the IMF and traditional patrons like Saudi Arabia and China increasingly unwilling to provide relief on favorable terms. Pakistan has obligations to repay nearly $80 billion in international loans in the next three to four years but has just $3 billion in foreign exchange reserves.[174]

Pakistan's Nuclear Weapons Stockpile. In September 2021, the *Bulletin of the Atomic Scientists* estimated that Pakistan "now has a nuclear weapons stockpile of approximately 165 warheads." The report added that "[w]ith several new delivery systems in development, four plutonium production reactors, and an expanding uranium enrichment infrastructure, however, Pakistan's stockpile... could grow to around 200 warheads by 2025, if the current trend continues."[175]

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 could 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 mile of Pakistan's premier defense academy has fueled concern that al-Qaeda can operate relatively freely in parts of Pakistan. Pakistan's weapons-grade materials were ranked the 19th least secure by the Nuclear Threat Initiative (NTI) in 2018 with only Iran's and North Korea's ranking less secure at 21st and 22nd, respectively.[176] In its 2020 report, the NTI assessed

that the "[m]ost improved among countries with materials in 2020 is Pakistan, which was credited with adopting new on-site physical protection and cybersecurity regulations, improving insider threat prevention measures, and more."[177]

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, a total collapse of the Pakistani state is highly unlikely. 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.

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 (LoC) in Kashmir, a disputed territory claimed in full by both India and Pakistan, are common occurrences.

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. Early in 2019, Pakistan conducted several tests of its nuclear-capable, short-range NASR ballistic missiles.[178]

After his party swept elections and he was named prime minister in 2014, Indian Prime Minister Narendra Modi invited Pakistani Prime Minister Nawaz Sharif to his swearing-in ceremony, but in August 2014, the two sides engaged in intense firing and shelling along their international border and 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.[179]

On December 25, 2015, 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. One week after the meeting, militants attacked an Indian airbase at Pathankot, killing seven Indian security personnel.[180]

Ever since then, a comprehensive India–Pakistan dialogue has remained frozen, although the two governments still communicate regularly with one another. New Delhi has insisted that Pakistan take concrete verifiable steps to crack down on terrorist groups before a comprehensive dialogue covering all outstanding issues—including the Kashmir dispute—can resume. Unfortunately, the past few years have been marred by additional terrorist attacks and cross-border shelling. The Pakistan-based Jaish-e-Mohammed (JeM) terrorist group, for example, was responsible for a January 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.[181]

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 LoC and dropped ordnance inside Pakistan proper (as opposed to disputed Kashmir), targeting several JeM training camps in Khyber Pakhtunkhwa province.[182] Delhi stressed that the "non-military" operation was designed to avoid civilian casualties and was preemptive in nature because India 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 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.[183] 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 more than 2,000 cease-fire violations during the same period.[184]

Skirmishes at the LoC accelerated in 2020. In February 2021, Indian Minister of Defence Rajnath Singh informed Parliament that "5,133 instances of ceasefire violations along the Line of Control (LoC) with Pakistan last year [had] resulted in 46 fatalities."[185] In early 2021, however, India and Pakistan experienced at least a partial diplomatic thaw as both countries dealt with the global COVID-19 pandemic. In February, both countries agreed to observe a strict cease-fire along the LOC,[186] and in March, Pakistan's Chief of Army Staff, General Qamar Javed Bajwa, declared in a speech that "it is time to bury the past and move forward."[187] As this book was being prepared, the cease-fire at the LoC was still in force.

In March 2022, India accidentally fired a cruise missile into Pakistan. The unarmed missile flew roughly 100 kilometers into Pakistan and crashed harmlessly without casualties. The Indian government blamed a "technical malfunction" during "routine maintenance."[188] Pakistan called the launch irresponsible and demanded a "joint probe to accurately establish the facts" in a response that one correspondent characterized as "measured."[189]

In January 2023, India notified Pakistan that it was seeking modification of the more than six-decade-old Indus Water Treaty, which governs water-sharing arrangements between the two countries, after Pakistan objected to the construction of an Indian dam on the Chenab river.[190]

India. During the Cold War, U.S.–Indian military cooperation was minimal except for a brief period during and after the China–India border war in 1962 when the U.S. provided India with supplies, arms, and ammunition. The rapprochement was short-lived, and the U.S. suspended arms and aid to India following the second Indo–Pakistan war in 1965. The relationship was largely characterized by mistrust in the 1970s under the Nixon Administration.

America's ties with India hit a nadir during the third Indo–Pakistan war in 1971 when the U.S. deployed the aircraft carrier USS *Enterprise* toward the Bay of Bengal in a show of support for Pakistani forces. Months earlier, India had signed a major defense treaty with the Soviet Union. India's close defense ties to Russia and America's close defense ties to Pakistan left the two countries estranged for the duration of the Cold War.

Military ties between the U.S. and India have improved significantly over the past two decades, particularly since the signing of a 10-year defense partnership and civil nuclear deal in 2005.[191] The two sides have established a robust 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."[192] The U.S. has supplied India with more than $25 billion worth of U.S. military equipment since 2008,[193] including C-130J and C-17 transport aircraft, P-8 maritime surveillance aircraft, Chinook airlift helicopters, Apache attack helicopters, artillery batteries, and Firefinder radar.[194] The two countries also have several information-sharing and intelligence-sharing agreements in place, including one that covers commercial shipping in the Indian Ocean.[195]

Defense ties have advanced at an accelerated rate since the election of Prime Minister 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.[196] Since then, Indian and U.S. warships have begun to offer each other refueling and resupply services at sea.[197] 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.[198]

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, which eases controls on exports of advanced defense technology.[199] 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.[200] In 2020, the U.S.

and India signed the Basic Exchange Cooperation Agreement (BECA), which creates a framework for the sharing of geospatial intelligence.[201]

Beyond these "foundational" or "enabling" military agreements, the two countries have also signed an agreement on Helicopter Operations from Ships Other Than Aircraft Carriers (HOSTAC)[202] and an Industrial Security Annex (ISA) that allows the U.S. to share classified information with private Indian defense firms.[203] 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.[204] 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.[205] 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[206] and a half-dozen highly capable P-8I maritime aircraft (to supplement the dozen currently in operation) for nearly $2 billion.[207]

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, Tiger Triumph.[208]

In February 2022, the U.S. Navy participated for the first time in the Indian Navy–led MILAN naval exercise, a multilateral exercise in the Bay of Bengal that involved the navies of more than a dozen countries. At the April 2022 India–U.S. 2+2 Ministerial Dialogue in Washington, the two sides signed "a Space Situational Awareness arrangement" and "agreed to launch an inaugural Defense Artificial Intelligence Dialogue."[209] They also committed to exploring the coproduction of Air-Launched Unmanned Aerial Vehicles under the Defense Trade and Technology Initiative (DTTI).

In addition, India agreed "to join the Combined Maritime Forces Task Force…to expand multilateral cooperation in the Indian Ocean," and the two sides agreed to "explore possibilities of utilizing Indian shipyards for repair and maintenance of ships of the U.S. Maritime Sealift Command to support mid-voyage repair of U.S. Naval ships."[210] The U.S. Department of Defense assessed that these initiatives "will allow the U.S. and Indian militaries to work more seamlessly together across all domains of potential conflict" and "jointly meet the challenges of this century."[211]

In October 2022, the U.S. Army conducted joint exercises with the Indian Army in the Himalayas roughly 50 miles from the disputed China–India border. During a visit to India earlier in 2022, "the US Army's Pacific Commanding General Charles Flynn described China's military build-up near the disputed border as 'alarming.'"[212]

In February 2023, the Biden Administration revealed that it was considering an application from General Electric for joint production of jet engines for fighter aircraft that are produced in India. The Biden Administration committed to an "expeditious review" of the application.[213] Jet engine technology is among the United States' most advanced, valuable, and sensitive military secrets; any technology transfer arrangement that included adequate safeguards would therefore mark a qualitative evolution of the India–U.S. defense partnership to exceed even some of America's legacy treaty alliances.

Quality of Key Allied or Partner Armed Forces in Asia

Because Asia lacks an integrated, regional security architecture along the lines of NATO, the United States partners with most of the region's nations on a bilateral basis. This means that there is no single standard to which all of the local militaries aspire; instead, capabilities 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 doctrines will meet the exigencies of wartime realities.

Based on examinations of equipment, 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-35s 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 and South Korea's military field more tanks, principal surface combatants, and combat-capable aircraft than their European counterparts field.

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.[214] South Korea also has the Korea Air and Missile Defense system comprised of Patriot Advanced Capacity-3 (PAC-3) and indigenous Chunggung medium-range missile interceptors and is developing a long-range missile defense system in pursuit of 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.[215] 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 against local resistance.[216] Currently, Tokyo plans to build an additional two Aegis-capable ships to compensate for cancellation of the Aegis Ashore project.

India now has the world's third largest military budget (approximately $73 billion in 2023) and second largest military (approximately 1.5 million personnel).[217] The Indian Navy is one of the few in the world to operate indigenously developed aircraft carriers and nuclear submarines; it commissioned its first indigenously built aircraft carrier in September 2022 and is now operating a refitted Russian carrier. Both conventional (non-nuclear) carriers are around 45,000 tons; a second, 65,000-ton conventional indigenous carrier is under construction and expected to enter service in the early 2030s.

India also operates 15 diesel electric submarines and one Russian-leased nuclear-powered ballistic missile submarine and has been fielding its own indigenously constructed nuclear-powered ballistic missile submarines since the induction of the *Arihant* in 2016.[218] The second in its class is expected to be commissioned in 2023.[219]

The Indian air force operates several world–class platforms, including American-built P-8 Poseidon surveillance aircraft and Apache attack helicopters, as well as C-130J and C-17 heavy transport aircraft. Its combat aircraft fleet is comprised of European, Russian, and Indian platforms, with the most advanced being the Sukhoi Su-30MKI.

The Indian army deploys a large fleet of Russian-origin tanks, advanced missile defense systems like the S-400, and the U.S.-origin M777 light howitzer. India also hosts advanced ballistic and cruise missile capabilities, including indigenously developed, long-range, nuclear-capable ICBMs and the supersonic, nuclear-capable BrahMos cruise missile developed jointly with Russia.

Although its small population and physical borders limit the size of its military, Singapore fields some of the region's highest-quality forces. Its 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)[220] and six frigates and eight missile-armed corvettes. Its air force has F-15E Strike Eagles and F-16s as well as one of Southeast Asia's largest fleets of airborne early warning and control aircraft (G550-AEW aircraft) and two squadrons of aerial refuelers, one

comprised of KC-130 tankers and the second of Airbus A330 Multi Role Tanker Transport aircraft, that can help to extend range or time on station.[221] In January 2020, the U.S. Department of State cleared Singapore to purchase "four short-takeoff-and-vertical-landing F-35 variants with an option for eight more of the 'B' models." Delivery is scheduled to begin in 2026.[222] In February 2023, Singapore exercised an option to expand its order to a total of 12 F-35B airframes.[223]

Australia's very capable armed forces are smaller than NATO militaries but have major operational experience, having deployed to Iraq and Afghanistan as well as to help the Philippines with its Southern insurgency. The Australian military deploys advanced surveillance aircraft and AWACS, advanced diesel-electric submarines, F-18 and F-35 fighter aircraft, and modern frigates and destroyers. Under the AUKUS arrangement, Australia will purchase three U.S. *Virginia*–class nuclear-powered submarines by the early 2030s, after which Australia and the U.K. will jointly develop a new class of nuclear-powered submarines based on U.S. designs and to be delivered in the late 2030s to early 2040s.[224]

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 1.4 percent of GDP on its military in 2022.[225] The most modern ships in the Philippine navy are three former U.S. *Hamilton*–class Coast Guard cutters. The Philippine navy has taken delivery of new South Korean–built frigates and is set to buy several other South Korean–built naval vessels.[226] The Philippines also has purchased 12 light attack fighter aircraft from South Korea[227] and has been cleared to acquire 12 new American F-16s.[228] In January 2022, the Philippines signed a deal worth more than $374 million to acquire BrahMos supersonic cruise missiles.[229]

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 4,150 personnel in the region.[230] It also conducts multiple naval deployments each year out of Metropolitan France. The U.K. is similarly 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 website:

> 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.[231]

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. The 36 countries within the command's AOR represent more than 50 percent of the world's population and include two of the three largest economies and 10 of the 14 smallest; the most populous nation (India); the largest democracy (India); the largest Muslim-majority nation (Indonesia); and the world's smallest republic (Nauru). In addition, "[t]he region is a vital driver of the global economy and includes the world's busiest international sea lanes and nine of the ten largest ports."[232] By any meaningful measure, the Indo-Pacific is also the world's most militarized region, with "seven of the world's ten largest standing militaries and five of the world's declared nuclear nations."[233]

USINDOPACOM's "component and sub-unified commands"[234] include:

- **U.S. Army Pacific.** USARPAC is the Army's component command in the Pacific. Headquartered in Hawaii and with "more than 107,000 Soldiers and Civilians,"[235] it supplies Army forces as necessary for various global contingencies. The command has 16

subordinate units: 8th Army, I Corps, 25th Infantry Division, 11th Airborne Division, 94th Air & Missile Defense Command, 8th Theater Sustainment Command, 7th Infantry Division, 2nd Infantry Division, 5th Security Force Assistance Brigade, 1st and 3rd Multi-Domain Task Force, 196th Infantry Brigade, 18th Medical Command, 311th Signal Command, U.S. Army Japan, 351st Civil Affairs Command, 9th Mission Support Command, 5th Battlefield Coordination Detachment, and the 500th Military Intelligence Brigade.[236]

- **U.S. Pacific Air Force.** With 46,000 servicemembers, PACAF is responsible for planning and conducting defensive and offensive air operations in the Asia–Pacific region.[237] 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.[238] The 5th Air Force includes the 374th Airlift Wing, 18th Wing, and 35th Fighter Wing. The wings maintain C-130 aircrews, C-12s, UH-1s, F-15s, F-16s, KC-135 refuelers, E-3 Airborne Warning and Control System aircraft, and HH-60G Pave Hawk rescue helicopters. The 7th Air Force operates out of Osan Air Base and Kunsan Air Base, which host the 51st Fighter Wing and 8th Fighter Wing. The wings are made up of three squadrons that include F-16s: the 35th Fighter Squadron, 36th Fighter Squadron, and 80th Fighter Squadron. The 11th Air Force is headquartered in Joint Base Elmendorf–Richardson and is the force provider for Alaskan Command. Other forces that regularly come under PACAF command include B-52, B-1, and B-2 bombers. The 11th Air Force's 354th Fighter Wing at Eielson Air Force Base completed the integration of 54 "combat-coded" F-35A aircraft in April 2022, increasing the number of squadrons to four.[239]

- **U.S. Pacific Fleet.** PACFLT normally controls all U.S. naval forces committed to the Pacific. Composed of 11 subordinate commands and approximately 200 ships, 1,500 aircraft, and 150,000 military and civilian personnel,[240] PACFLT is organized into the Seventh Fleet, headquartered in Japan, and the Third Fleet, headquartered in California. The Seventh Fleet includes 50–70 ships and submarines, 150 aircraft, and more than 27,000 sailors and Marines, including 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.[241] The Third Fleet's AOR extends from the West Coast of the United States to the International Date Line and includes the Alaskan coastline and parts of the Arctic. Third Fleet component units include four carrier strike groups (CSGs). 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 because of several well-publicized operations in the South China Sea. Both the Trump and Biden Administrations have maintained a high frequency of these operations.

- **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.[242] 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 "is a sub-unified command of USSOCOM [U.S. Special Operations Command] under the operational control [of] U.S. Indo-Pacific Command and serves as the functional component for all special operations missions

deployed throughout the Indo-Asia-Pacific region." Its "area of focus covers 36 countries and encompasses half of the Earth's surface."[243] Among the special operations forces under SOCPAC's control are 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. Its core activities include (among others) counterinsurgency and unconventional warfare, hostage rescue and recovery, training of foreign security forces, and support for "DOD humanitarian activities conducted outside the US and its territories to relieve or reduce human suffering, disease, hunger, or privation."[244]

- **U.S. Forces Korea.** USFK is a USINDOPACOM subordinate-unified command and is stationed in South Korea. It is responsible for organizing, training, and equipping U.S. forces on the Korean Peninsula as directed by USINDOPACOM in support of the U.S.–South Korean Combined Forces Command (CFC) and United Nations Command (UNC). USFK is commanded by a four-star U.S. general who serves concurrently as commander of CFC and UNC.[245]

- **U.S. Forces Japan.** USFJ is a USINDOPACOM subordinate-unified command. It is commanded by a three-star U.S. general who serves concurrently as commander of the Fifth Air Force. USFJ plans, trains, and executes missions to defend Japan and maintain stability in the Indo-Pacific region.[246]

Key Infrastructure That Enables Expeditionary Warfighting Capabilities

Any planning for operations in the Pacific will inevitably be dominated by the "tyranny of distance." Because of the extensive distances that must be traversed, even Air Force units will take one or more days to deploy, and ships measure steaming time in weeks. A ship sailing at 20 knots, for instance, 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—assuming that ships encounter no interference along the way.[247]

China's growing anti-access/area denial (A2/AD) capabilities, which range 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 in the ensuing 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. The Marine Corps reopened Marine Corps Base Camp Blaz on January 26, 2023, and in the coming years will host 5,000 Marines comprising various aviation, ground combat, combat support, logistics, and headquarters units.[248] 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.[249] These improvements have been accelerated and expanded even as China's A2/AD capabilities have raised doubts about America's ability to sustain operations in the Asian littoral. The concentration of air and naval assets as well as logistical infrastructure on Guam would make it an attractive target in the event of conflict, and the increasing reach of Chinese and North Korean ballistic missiles only adds to this growing vulnerability.

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 those areas. U.S. Navy units 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 that the United States 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. 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. The United States has access to more than 80 different facilities in Japan, 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* CSG, which is home-ported in Yokosuka, and a Navy-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. It would take years if not decades to replace them.

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. capability 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 America'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 completed at least until 2025, but the U.S. and Japanese governments have affirmed their support for the project.

South Korea. United States facilities in South Korea are focused on deterring North Korean aggression and preparing for other possible North Korea–related contingencies. The Army maintains 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. Eighth Army, which is based in South Korea. In November 2022, the U.S. completed the relocation of its Republic of Korea–United States Combined Forces Command from Yongsan to Camp Humphreys, located 40 miles south of Seoul.[250] South Korea paid 92 percent of the $11 billion cost of building Camp Humphreys, the largest U.S. base on foreign soil. 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 the base's lease expired. 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 Palawaan, closest to the Spratlys; Basa Air Base, located on the main Philippine 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 engaged in low-intensity combat with Islamist insurgents; and Mactan-Benito Ebuen Air Base in the central Philippines.[251] Construction of a humanitarian assistance and disaster relief warehouse at Basa Air Base was completed in 2018.[252] American F-16s based in South Korea deployed there for a 12-day exercise with Philippine fighter jets in 2019[253] and exercised there again in 2020.[254] In April 2023, four new sites were announced.[255] Naval Base Camilo Osias and Lal-lo Airport are located in Cagayan province in northern Luzon, relatively close to Taiwan across the Bashi Channel, a frequent location of Chinese military activity. Camp Melchor Dela Cruz is also located in northern Luzon in the neighboring province of Isabela. The fourth newly announced site is Balabac Island in Palawan province, which is located in the South China Sea.[256]

In March 2023, a pair of F-22 Raptors alongside support aircraft traveled to Clark Air Base for training and integration with the Philippine Air Force. This is the first time fifth-generation aircraft have operated from the Philippines.[257]

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.[258] In April 2023, a U.S. Air Force RQ-4 Global Hawk was sighted operating from Changi Air Base (East) during the first known deployment of that platform to Singapore.[259]

Australia. The most prominent element of the U.S. presence in Australia is the deployment of U.S. Marines to Darwin in the northern part of the country. In keeping with Australian sensitivities about permanent American bases on Australian soil, however, the Marines do not maintain a permanent presence in the country.[260] 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 western Australia.[261] Pursuant to the 2023 AUKUS agreement, the U.S. will establish a rotational presence of submarines, to be known as Submarine Rotational Force West (SRF–West), as early as 2027.[262]

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)."[263]

Specifically, "MPF ships deliver a forward presence and rapid crisis response capability by pre-positioning equipment and supplies to various locations at sea."[264] 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 widely varying capabilities. The region includes 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 (to say nothing of moving them 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 consist 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 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 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, 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.[265]

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				✓	

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Conclusion: Scoring the Global Operating Environment

Because the United States is a global power with global security interests, threats to those interests can emerge from any region. The U.S. military must therefore 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. These considerations necessarily inform its decisions about the types and amounts 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 *2024 Index*.

Global Operating Environment

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

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, and its invasion of Ukraine marks a serious escalation of its efforts to exert influence on its periphery. China continues to maintain a significant presence in Europe through its propaganda, influence operations, and investments in key sectors. By mitigating the effect of sanctions, it also has significantly enhanced the Russian government's ability to conduct the war in Ukraine. Both NATO and many non-NATO European countries should be increasingly concerned about the behavior and ambitions of both Russia and China, although agreement on a collective response to these challenges remains elusive.

In the *2023 Index*, we noted a strengthening of alliance relationships as NATO member countries conducted reviews of their respective military establishments and the ability of NATO as a whole to coordinate actions. NATO placed renewed emphasis on logistical matters and the extent to which it could respond to an emergent crisis.

In the past year, we have seen a galvanizing effect within political establishments that, while still dynamic and pointed within the domestic context of each country, appear to have made gains in aggregate stability as countries once again focus on national matters that arguably have been neglected since the end of the Cold War. Within specific countries, there are shifts between liberal and conservative governments, but the net result has been generally positive with respect to U.S. security interests,

Global Operating Environment: Summary

VERY POOR	UNFAVORABLE	MODERATE	FAVORABLE	EXCELLENT

especially as countries commit to improving their defense capabilities, readiness, and posture.

This has led us to increase Europe's score for political stability from "favorable" to "excellent." It is difficult to predict whether NATO's renewed emphasis on collective defense and its reinvigorated defense spending will continue over the long term or is merely a short-term response to Russia's aggression in Ukraine. Given the potential for Russia to replace its battlefield losses with newer, more modern equipment, NATO defense spending on capability will be an important issue, both in the medium term and over the long term.

Scores for Europe remained largely steady this year as they have in previous years with one exception: As noted, the score for political stability has risen from "favorable" to "excellent." The *2024 Index* again assesses the European operating environment as "favorable" overall.

The Middle East. The Middle East will remain a focus of U.S. military planners for the foreseeable future because of the interests involved and the region's volatile nature. The Middle East region is now highly unstable, in large measure because of the erosion of authoritarian regimes, the strain on World War I–era borders, and the fact that the region remains a breeding ground for terrorism. Overall, regional security has continued to deteriorate. Iraq has restored its territorial integrity since the defeat of ISIS, but the political situation and future relations with 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 generally complex, although 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. The result could well 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 that is 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 *2024 Index* assesses the Middle East operating environment as "moderate," but the region's political stability continues to be "unfavorable," and its overall score could decline to "poor" in the future if current trends toward further instability continue.

Asia. The Asian strategic environment includes half of 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 the defense of U.S. security interests in Asia 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 interested in developing missile defense capabilities that will be essential in combatting the regional threat posed by North Korea. In Japan, public awareness of the need to adopt a more "normal" military posture in response to China's increasingly aggressive actions continues to grow. This indicates a break with the pacifist tradition among the Japanese that has lasted since the end of World War II and could lead to improved military capabilities and the prospect of joining the U.S. in defense measures beyond the immediate vicinity of Japan.

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