China

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The People's Republic of China (PRC) represents the greatest military threat facing the U.S. today. The 2022 National Security Strategy frames the PRC as "America's most consequential geopolitical challenge" and "the only competitor with both the intent to reshape the international order and, increasingly, the economic, diplomatic, military, and technological power to do it."[1] The 2022 National Defense Strategy adds that:

> The comprehensive and serious challenge to U.S. national security is the PRC's coercive and increasingly aggressive endeavor to refashion the Indo-Pacific region and the international system to suit its interests and authoritarian preferences. The PRC seeks to undermine U.S. alliances and security partnerships in the Indo-Pacific region, and leverage its growing capabilities, including its economic influence and the People's Liberation Army's (PLA) growing strength and military footprint, to coerce its neighbors and threaten their interests. The PRC's increasingly provocative rhetoric and coercive activity towards Taiwan are destabilizing, risk miscalculation, and threaten the peace and stability of the Taiwan Strait. This is part of a broader pattern of destabilization and coercive PRC behavior that stretches across the East China Sea, the South China Sea, and along the Line of Actual Control [with India]. The PRC has expanded and modernized nearly every aspect of the PLA, with the focus on offsetting U.S. military advantages. The PRC is therefore the pacing challenge for the Department [of Defense].[2]

In recent years, the PRC has been acting more aggressively in the Indo-Pacific, particularly with regard to its territorial disputes in the South China Sea, in the East China Sea, along the China–India border, and in the Taiwan Strait.

The Communist Party of China (CCP) held its 20th Party Congress from October 16 to 22, 2022. General Secretary Xinping's report "focused on intensifying and accelerating the People's Liberation Army's modernization goals over the next five years, including strengthening its 'system of strategic deterrence.'"[3] According to the DOD's 2022 report on *Military and Security Developments Involving the People's Republic of China*:

> The military dimensions of the Report to [the] 20th Party Congress focused on intensifying and accelerating the People's Liberation Army's modernization goals, to include deploying PLA forces on a "regular basis and in diversified ways." In order to achieve the PLA's 2027 centenary goal, the 20th Party Congress set objectives "to provide new military strategic guidance, establish a strong system of strategic deterrence, increase the proportion of new-domain forces (most likely cyberspace and space) with new combat capabilities, speed up the development of unmanned, intelligence combat capabilities, and promote the development and application of the network information system."[4]

The DOD report further reflects that, among other notable developments:

- In 2021, the People's Liberation Army Navy (PLAN) "resumed series construction of the JIANGKAI II class frigate."[5]

- "[D]omestically built aircraft and a wide range of UAVs [unmanned aerial vehicles]" continue to modernize the People's Liberation Army Air Force (PLAAF).[6]

- "In 2021, the PLARF [People's Liberation Army Rocket Force] launched approximately 135 ballistic missiles for testing and training. This was more than the rest of the world combined, excluding ballistic missile deployment in conflict zones."[7]

- In 2021, "the PRC continued building three solid-fueled intercontinental ballistic missile (ICBM) silo fields, which will cumulatively contain at least 300 new ICBM silos."[8]

- "[T]he PRC's operational nuclear warhead stockpile has surpassed 400," and "[i]f China continues the pace of its nuclear expansion, it will likely field a stockpile of about 1500 warheads by its 2035 timeline."[9]

- The ability to deny U.S. access to areas around China or to deny that ability of U.S. forces to operate within range of Chinese weapons, often referred to as anti-access/area denial (A2/AD) capabilities, is credible within the First Island Chain and increasingly projecting into the Philippine Sea and Pacific Ocean.[10]

- Deployment of the DF-17 hypersonic glide vehicle (HGV) "will continue to transform the PLA's missile force."[11]

- China is increasingly interested in counter-space capabilities that can "deter and counter third-party intervention during a regional military conflict."[12]

The CCP is still heavily influenced by Marxist-Leninist ideology.[13] As neatly summarized by Australian expert John Garnaut, "[t]he key point about Communist Party ideology—the unbroken thread that runs from Lenin through Stalin, Mao and Xi—is that the party is and always has defined itself as being in perpetual struggle with the 'hostile' forces of Western liberalism."[14] Today, "[f]or the first time since Mao we have a leader [in Xi Jinping] who talks and acts like he really means it."[15]

The CCP's ideology consistently animates it to invest in military capabilities and activities that pose substantial challenges to U.S. interests. Moreover, with a GDP of over $18 trillion—second only to that of the U.S.—China has the economic foundations to sustain an unprecedented military modernization effort while advancing efforts to dominate critical next-generation technologies and supply chains that are vital to the health of the U.S. economy and the U.S. military. From crucial minerals to pharmaceuticals, renewables, artificial intelligence, and missile technology, China is a global economic power and the largest trading partner of a majority of global capitals.

In short, China has become "the greatest external threat America has faced since the collapse of the USSR."[16]

Threats to the Homeland

With more than 2 million active military personnel, the People's Liberation Army remains one of the world's largest militaries, and its days of largely obsolescent equipment are in the past.[17] In March 2023, China announced a draft defense budget of $224.79 billion, an increase of 7.2 percent, marking the eighth consecutive year of single-digit increases.[18] The PRC defense budget has increased each year for more than two decades, "sustaining [China's] position as the second-largest military spender in the world."[19] From the late 1990s to the mid-2010s, China's official defense budget increased by double-digit percentages nearly every year.[20]

Reporting has been inconsistent, however, and it is estimated that China spends more on defense than it officially acknowledges.[21] This spending has been complemented by improvements in Chinese military training and, in 2015, the largest reorganization in the PLA's history.[22] The PLA has lost 300,000 personnel since those reforms, but its overall capabilities have increased as newer, much more sophisticated systems have replaced older platforms.[23]

PLA Army. The PLA Army (PLAA) is no longer automatically in charge of war zones or higher headquarters functions. This is due to the 2015 reorganization that established separate ground forces headquarters and bureaucracy; previously, the ground forces had been the default service providing staffs and commanders. At the same time, the PLAA has steadily modernized its capabilities,

incorporating both new equipment and a new organization. The PLAA currently "has approximately 975,000 active-duty personnel in combat units" and is the PLA's "primary ground fighting force."[24] The force is increasingly equipped with modern armored fighting vehicles, air defenses, both tube and rocket artillery, and electronic support equipment.

PLAA brigades participate in annual exercises, including STRIDE-2021, and joined the ZAPAD/INTERACTION-2021 exercise, the first specialty exercise conducted by the PLAA in 2021 that included combined training with the Russian military on Chinese soil. ZAPAD/INTERACTION-2021 included "theoretical and systems training, weapon swaps, and a culminating exercise to further understanding and cooperation between the two militaries."[25]

PLA Navy. Between 2015 and 2020, the PLAN "surpassed the U.S. Navy in numbers of battle force ships (meaning the types of ships that count toward the quoted size of the U.S. Navy)."[26] Today, according to the U.S. Department of Defense:

> The PLAN is the largest navy in the world with a battle force of approximately 340 platforms, including major surface combatants, submarines, aircraft carriers, ocean-going amphibious ships, mine warfare ships, and fleet auxiliaries. In 2021, the PLAN's overall battle force shrank due to the transfer of 22 early flight JIANGDAO clad corvettes to the China Coast Guard. This figure does not include 85 patrol combatants and craft that carry anti-ship cruise missiles (ASCMs). The PLAN's overall battle force is expected to grow to 400 ships by 2025 and 440 ships by 2030.[27]

The PLAN has fielded increasingly sophisticated and capable multi-role ships. Multiple classes of surface combatants are now in series production, including the Type 055 cruiser and the Type 052C and Type 052D guided missile destroyers, each of which fields long-range surface-to-air missile (SAM) and anti-ship cruise missile systems, as well as the Type 054 frigate and Type 056 corvette.

The PLAN has similarly been modernizing its submarine force. Since 2000, it has consistently fielded between 50 and 60 diesel-electric submarines, but the age and capability of the force have been improving as older boats, especially 1950s-vintage *Romeo*–class boats, have been replaced with newer designs. These include a dozen *Kilo*–class submarines purchased from Russia and domestically designed and manufactured *Song* and *Yuan* classes. All of these are believed to be capable of firing both torpedoes and anti-ship cruise missiles.[28] The Chinese have also developed variants of the *Yuan*, with an air-independent propulsion (AIP) system that reduces the boats' vulnerability by removing the need to use noisy diesel engines to recharge batteries, and are "expected to produce a total of 25 or more YUAN class submarines by 2025."[29]

The PLAN has been expanding its amphibious assault capabilities as well. The PLA Marine Corps (PLANMC), for example, is China's counterpart to the U.S. Marine Corps. According to the DOD:

> The PLANMC is still in the process of completing expansion requirements set forth by the CMC under PLA reform in 2016. Serving as the PLAN land combat arm, the PLANMC continued to evolve throughout 2021 and is receiving equipment and training necessary to become the PLA's preeminent expeditionary force, as directed by Xi Jinping. All six PLANMC maneuver brigades have achieved initial operating capability (IOC); three brigades are assessed to be fully mission capable. Two other PLANMC brigades—the aviation brigade and special operations brigade, are IOC and Full Operational Capability (FOC), respectively. The aviation brigade will likely not achieve FOC status until at least 2025 and likely beyond, based on the current pace [at which] the brigade is receiving new helicopters, fully trained flight crews, and support equipment.[30]

To move this force, the Chinese have begun to build more amphibious assault ships, including Type 071 amphibious transport docks.[31] Each can carry about 800 naval infantrymen and move them to shore by means of four air-cushion landing craft and four helicopters.

Supporting these expanded naval combat forces is a growing fleet of support and logistics vessels. The 2010 PRC defense white paper noted the accelerated construction of "large support vessels." It also noted specifically that the navy is exploring "new methods of logistics support for sustaining long-time maritime missions."[32] These include tankers and fast combat support ships that

extend the range of Chinese surface groups and allow them to operate for more prolonged periods away from main ports. Chinese naval task forces dispatched to the Gulf of Aden have typically included such vessels.

The PLAN has also been expanding its naval aviation capabilities, the most publicized element of which has been the growing Chinese carrier fleet. This currently includes not only the *Liaoning*, purchased from Ukraine over a decade ago, but a domestically produced copy, the *Shandong*, that completed its first exercise in 2021.[33] Both of these ships have ski jumps for their air wing, but the Chinese are also building several conventional takeoff/barrier landing (CATOBAR) carriers (like American or French aircraft carriers) that will employ catapults and therefore allow their air complement to carry more ordnance and/or fuel.[34] It is expected that the PRC's second domestically built carrier, the *Fujian*, will be operational by 2024.[35]

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

PLA Air Force. The PLA Air Force (PLAAF) and PLA Aviation together form Asia's largest air force and the world's third largest. Of its more than 2,800 aircraft, 2,250 are combat aircraft, including fighters, strategic bombers, tactical bombers, multi-mission tactical, and attack aircraft.[36] The force has shifted steadily from one that is focused on homeland air defense to one that is capable of power projection, including long-range precision strikes against both land and maritime targets. The DOD's 2022 report on Chinese capabilities notes that:

> [T]he PLAAF is seeking to extend its power projection capability with the development of a new H-20 stealth strategic bomber, with official PRC state media stating that this new stealth bomber will have a nuclear mission in addition to filling conventional roles. The PLAAF is also developing new medium-[range] and long-range stealth bombers to strike regional and global targets. PLAAF leaders publicly announced the program in 2016, however it may take more than a decade to develop this type of advanced bomber.[37]

The PLAAF currently has 1,800 fighters, more than 800 of which are fourth-generation fighters that are comparable to the U.S. F-15, F-16, and F-18.[38] They include the domestically designed and produced J-10 as well as the Su-27/Su-30/J-11 system, which is comparable to the F-15 or F-18 and dominates both the fighter and strike missions.[39]

China has made progress on two fifth-generation stealth fighter designs. The J-20, the larger of the two aircraft and resembling the American F-22 fighter, has been operationally fielded. Prospective upgrades may include increasing the number of air-to-air missiles, installing thrust-vectoring engine nozzles, and adding super-cruise capability through the installation of higher-thrust WS-15 engines.[40] The J-31, which is currently not operational, appears to resemble the F-35, but with two engines rather than one. The production of advanced combat aircraft engines remains one of the greatest challenges to Chinese fighter design.

The PLAAF is also deploying increasing numbers of H-6 bombers, which can undertake longer-range strike operations including operations employing land-attack cruise missiles. Although the H-6, like the American B-52 and Russian Tu-95, is a 1950s-era design copied from the Soviet-era Tu-16 Badger bomber, the latest versions (H-6K) are equipped with updated electronics and engines and are made of carbon composites. In addition, China is developing the H-20, a flying wing–type stealth bomber that is probably similar to the U.S. B-2.[41]

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

extended, sustained operations, and the Chinese aerial tanker fleet, which is based on the H-6 aircraft, has been expanding.

At the biennial Zhuhai Air Show, Chinese companies have displayed a variety of unmanned aerial vehicles that reflect substantial investments and research and development efforts. The surveillance and armed UAV systems include the Xianglong (Soaring Dragon) and Sky Saber systems. The DOD's 2019 report on Chinese capabilities stated that China had "successfully tested the AT-200, which it claims is the 'world's first large cargo UAV,'" and further specified that "[t]his drone can carry up to 1.5 tons of cargo and... may be especially suited to provide logistic support to PLA forces in the South China Sea."[42] Chinese UAVs have been included in various military parades over the past several years, suggesting that they are being incorporated into Chinese forces, and the DOD's 2022 report on Chinese capabilities states that "[t]he PLAAF is rapidly catching up to Western air forces and continues to modernize with the delivery of domestically built aircraft and a wide range of UAVs."[43]

The PLAAF is also responsible for the Chinese homeland's strategic air defenses. Its array of surface-to-air missile batteries is one of the world's largest and includes the Russian S-300 (SA-10B/SA-20) and its Chinese counterpart, the Hongqi-9 long-range SAM. The S-400 series of Russian long-range SAMs, delivery of which began in 2018, mark a substantial improvement in PLAAF air defense capabilities, as the S-400 has both anti-aircraft and anti-missile capabilities.[44] China has deployed these SAM systems in a dense, overlapping belt along its coast, protecting the nation's economic center of gravity. Key industrial and military centers such as Beijing are also heavily defended by SAM systems.

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

PLA Rocket Force. Chinese nuclear forces are the responsibility of the PLA Rocket Force, one of three new services created on December 31, 2015. China's nuclear ballistic missile forces include land-based missiles with a range of 13,000 kilometers that can reach the U.S. and CSS-4 and submarine-based missiles that can reach the U.S. when the submarine is deployed within missile range. The DOD "estimates that the PRC's operational nuclear warheads stockpile has surpassed 400."[45] The PLARF "ICBM arsenal consists of approximately 300 ICBMs, including fixed and mobile launchers capable of launching unitary and multiple reentry vehicles."[46]

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

Unlike the United States or the Soviet Union, China chose to pursue only a minimal nuclear deterrent and fielded only a small number of nuclear weapons: 100–150 weapons on medium-range ballistic missiles and approximately 60 ICBMs. Its only ballistic missile submarine (SSBN) conducted relatively few deterrence patrols (perhaps none),[47] and its first-generation submarine-launched ballistic missile (SLBM), the JL-1, if it ever attained full operational capability had limited reach. The JL-1's 1,700-kilometer range makes it comparable to the first-generation Polaris A1 missile fielded by the U.S. in the 1960s.

After remaining stable for several decades, China's nuclear force became part of Beijing's two-decade modernization effort. The result has been both modernization and expansion of the Chinese nuclear deterrent. The core of China's ICBM force is the DF-31 series, a solid-fueled, road-mobile system, along with a growing number of longer-range, road-mobile DF-41 missiles that are now in the PLA operational inventory. The DOD's 2022 report on China's capabilities states that the PRC is now "fielding the DF-41, China's first road-mobile and silo-based ICBM with MIRV capability."[48] China's medium-range nuclear forces have similarly shifted to mobile, solid-rocket systems so that they are both more survivable and more easily maintained.

Imagery analysts at several think tanks have discovered at least three fields of silos under

construction in western China.[49] Each field appears to contain around 100 silos, indicating that China could dramatically expand its land-based nuclear deterrent component. In 2021 alone, "the PLARF launched approximately 135 ballistic missiles for testing and training, more than the rest of the world combined excluding ballistic missile employment in combat zones."[50] DOD assesses that as China constructs new nuclear facilities, it "intends to use this infrastructure to produce nuclear warhead material for its military in the near term." Two CFR-600 sodium-cooled fast breeder nuclear reactors are being constructed at Xaipu, for example, and each is "capable of producing enough plutonium for dozens of nuclear warheads annually."[51]

Notably, the Chinese are also expanding their ballistic missile submarine fleet. According to the DOD:

> Over the past 15 years, the PLAN has constructed twelve nuclear submarines—two SHANG I class SSNs (Type 093), four SHANG II class SSNs (Type 093A), and six JIN class SSBNs (Type 094). Equipped with the CSS-N-14 (JL-2) submarine-launched ballistic missile (SLBM) (7,200KM), the PLAN's six operational JIN class SSBNs represent the PRC's first credible sea-based nuclear deterrent.[52]

In addition, each of China's JIN–class SSBNs "is equipped to carry up to 12 JL-2 or JL-3 SLBMs."[53]

There is some possibility that the Chinese nuclear arsenal now contains land-attack cruise missiles. The CJ-20, a long-range, air-launched cruise missile carried on China's H-6 bomber, may be nuclear-tipped, although the evidence that China has pursued such a capability is admittedly limited. China is also believed to be working on a cruise missile submarine that, if equipped with nuclear cruise missiles, would further expand the range of its nuclear attack options.[54]

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

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

In addition to strategic nuclear forces, the PLARF has responsibility for medium-range and intermediate-range ballistic missile (MRBM and IRBM) forces. These include (among others) the DF-21 MRBM, which has a range of approximately 1,500 kilometers, and the DF-26 IRBM, which has a range of approximately 3,000 kilometers and is "capable of conducting precision conventional or nuclear strikes against ground targets as well as conventional strikes against naval targets."[55] It is believed that Chinese missile brigades equipped with these systems may have both nuclear and conventional responsibilities, making any deployment from garrison much more ambiguous from a stability perspective. The expansion of these forces also raises questions about the total number of Chinese nuclear warheads.

While it is unclear whether they are nuclear-armed, China's hypersonic glide vehicles also pose a growing threat to the United States and its allies. Hypersonic glide vehicles are slower than ICBMs—Mach 5 for a hypersonic vehicle as opposed to Mach 25 for an ICBM warhead—but are designed to maneuver during their descent, making interception far more difficult. During a Chinese test in August 2021, a hypersonic vehicle apparently went into orbit.[56] This creates a fundamentally different threat, as a fractional orbital bombardment system (FOBS) could allow attacks from southern trajectories—that is, from over the South Pole—or even the placement of warheads in orbit, which would make them almost impossible to intercept. Even without a nuclear warhead, an orbiting hypersonic vehicle could do enormous damage to a city or a military facility such as an air base or an ICBM

silo. Because of the strategic instability that FOBS programs would introduce, neither the U.S. nor the Soviet Union ever pursued them.

PLA Strategic Support Force. The PLA's major 2015 reorganization included creation of the PLA Strategic Support Force (PLASSF). Strategic space, cyber, electronic, information, communications, and psychological warfare missions and capabilities are centralized under the PLASSF.[57] Previously, these capabilities had been embedded in different departments across the PLA's General Staff Department and General Armaments Department. By consolidating them into a single service, the PLA has created a Chinese "information warfare" force that is responsible for offensive and defensive operations in the electromagnetic and space domains.

The PLASSF has an estimated 175,000 personnel.[58] The SSF Space Systems Department handles most PLA space operations and operates at least eight bases.[59] The PLA views space superiority as critical for winning "informatized warfare" and likely considers it a deterrent and countermeasure against any possible U.S. military interventions during a regional military contingency.[60] The SSF Network Systems Department implements the PLA's "Three Warfares" concept, "which comprises psychological warfare, public opinion warfare, and legal warfare," and "is the only publicly known organization in the PLA that performs psychological warfare operations."[61]

Chinese network warfare forces are known to have conducted a variety of cyber and network reconnaissance operations as well as cyber economic espionage. In 2014, the U.S. Department of Justice charged PLA officers from Unit 61398, then a unit in the General Staff Department's 3rd Department, with the theft of intellectual property and implanting of malware in various commercial firms.[62] Members of that unit are thought also to be part of Advanced Persistent Threat-1, a group of computer hackers believed to be operating on behalf of a nation-state rather than a criminal group. In 2020, the Department of Justice charged several PLA officers with one of the largest breaches in history: stealing the credit ratings and records of 147 million people from Equifax.[63]

The PRC has been conducting space operations since 1970 when it first orbited a satellite, but its space capabilities did not gain public prominence until 2007 when the PLA conducted an anti-satellite (ASAT) test in low Earth orbit against a defunct Chinese weather satellite. The test became one of the worst debris-generating incidents of the space age: Many of the several thousand pieces of debris that were generated will remain in orbit for more than a century.

Equally important, Chinese counter-space efforts have been expanding steadily. The PLA not only has tested ASATs against low Earth orbit systems, but also is believed to have tested a system designed to attack targets at geosynchronous orbit (GEO) approximately 22,000 miles above the Earth.[64] Because many vital satellites are at GEO, including communications and missile early-warning systems, China's ability to target such systems constitutes a major threat. In early 2022, China's Shijian-22 towed a dead Chinese satellite into a "graveyard" orbit above the GEO belt.[65] This was officially touted as a servicing operation, but the ability to attach one satellite to another and then tow it also has potential military implications.

The creation of the PLASSF, incorporating counter-space forces, reflects the movement of counter-space systems, including direct-ascent ASATs, out of the testing phase to fielding with units. In 2018, for example, the U.S. National Air and Space Intelligence Center (NASIC) noted that "China has military units that have begun training with anti-satellite missiles."[66]

Threat of Regional War

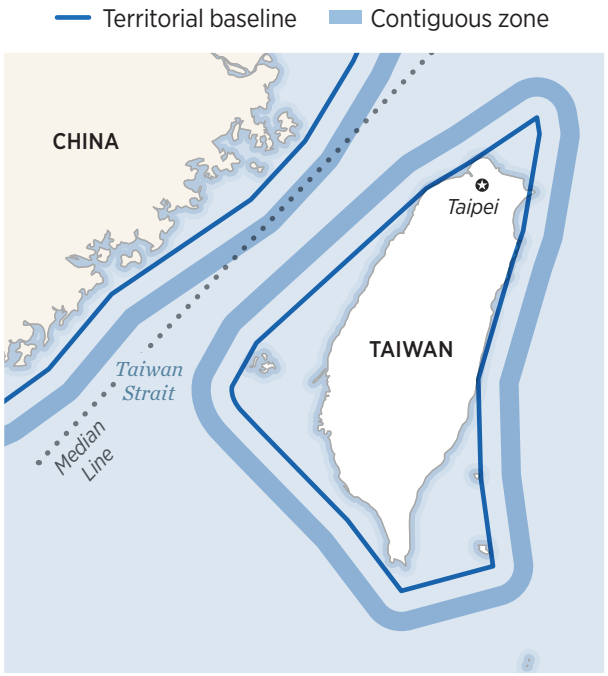
Three issues, all involving China, threaten American interests and embody the "general threat of regional war" noted at the outset of this section: the status of Taiwan, the escalation of maritime and territorial disputes, and border conflict with India.

Taiwan. China's escalating efforts to change the status quo in the Taiwan Strait constitute the greatest risk of conflict between China and the United States. China's long-standing threat to end Taiwan's de facto independence and ultimately to bring Taiwan under the authority of Beijing—by force if necessary—is also a threat both to a major American security partner and to the American interest in peace and stability in the Western Pacific.

While China's use of force against Taiwan could take a variety of forms, the possibility of an amphibious invasion has fueled speculation over when such a contingency would most likely occur. Congressman Mike Gallagher (R–WI), chairman

MAP 4

Maritime Boundaries in the Taiwan Strait



SOURCE: "America and China Spar over the Taiwan Strait," *The Economist*, June 23, 2022, https://www.economist.com/china/2022/06/23/america-and-china-spar-over-the-taiwan-strait (accessed September 8, 2023).

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of the House Select Committee on the Strategic Competition Between the United States and the Chinese Communist Party, has argued that "the U.S. military is entering into a 'window of maximum danger,'" more commonly known as the "Davidson Window."[67] This is a reference to former U.S. Indo-Pacific Command (USINDOPACOM) Commander Admiral Philip Davidson's statement during testimony before the Senate Armed Services Committee in 2021 that China is "accelerating [its] ambitions to supplant the United States" and that "I think the threat [to Taiwan] is manifest during this decade, in fact, in the next six years."[68] Separately, CIA Director William Burns has stated that Xi has instructed the PLA "to be ready by 2027 to invade Taiwan," although he has also assessed that Xi and the PLA "have doubts today about whether they could accomplish that invasion."[69] In April 2023, USINDOPACOM Commander Admiral John Aquilino stated that everyone is still "guessing" when China will invade.[70]

Tensions across the Taiwan Strait have worsened as a result of Beijing's efforts to pressure and isolate Taiwan's democratically elected government. Beijing has suspended most direct government-to-government discussions with Taipei and is using a variety of inducements to deprive Taiwan of its remaining diplomatic partners.

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

- China has dramatically escalated aerial activity around Taiwan and incursions into Taiwan's self-declared air defense identification zone, repeatedly setting records over recent years.
- In 2021, China sent more than 150 aircraft into Taiwan's ADIZ over four days, a record at that time.[71]
- Total Chinese aerial incursions into Taiwan's ADIZ increased from 380 aircraft in 2020 to 960 in 2021 and 1,727 in 2022.[72]
- China used U.S. House Speaker Nancy Pelosi's August 2022 visit as a pretext to increase the quantity and provocativeness of aerial incursions around Taiwan, with a historic record of 446 aircraft entering Taiwan's ADIZ and more than 300 of those 446 aircraft crossing the median line of the Taiwan Strait. Chinese aircraft had last crossed the median line in September 2020 with 48 aircraft involved that month.[73]
- China's August 2022 military provocations also saw a peak in naval activity, with as many as 14 PLAN vessels operating around Taiwan simultaneously; the declaration of "exercise zones" surrounding Taiwan, which interfered with shipping and air traffic; and the launch of conventional ballistic missiles, long-range rockets, and short-range missiles from mainland China, some of which flew over Taiwan or landed in Japan's Exclusive Economic Zone (EEZ)—seemingly a rehearsal for the blockade of Taiwan.[74]

- In April 2023, China again escalated to new historic records of military activity around Taiwan, allegedly in response to the transit of Taiwan's President through the United States, although such routine travel stops had not drawn similar responses in the past. On the final day of these "exercises," a dozen Chinese warships and 91 Chinese aircraft—a new record for a single day—practiced "joint shock and deterrence and island closure and control," essentially another rehearsal for a blockade.[75]

- Chinese fighters, along with airborne early warning aircraft, have increased their exercises southwest of Taiwan, demonstrating a growing ability to conduct flexible air operations and reduced reliance on ground-based control,[76] and have undertaken sustained joint exercises to simulate extended air operations, employing both air and naval forces including aircraft carrier operations.[77] Such exercises have focused increasingly on denying U.S. and allied forces use of the Bashi Channel, a strategic corridor through the First Island Chain between Taiwan and the Philippines that would be essential in a Taiwan contingency.[78]

Chinese leaders from Deng Xiaoping and Mao Zedong to Xi Jinping have consistently emphasized the importance of ultimately reclaiming Taiwan. The island—along with Tibet—is the clearest example of a geographical "core interest" for the Chinese Communist Party, seen as essential for its claim to unchallenged rule. China has never renounced the use of force against Taiwan and continues to employ political warfare against Taiwan's political and military leadership.

For the Chinese leadership, the failure to effect unification, whether peacefully or by using force, would reflect fundamental political weakness. CCP leaders therefore believe that they cannot back away from the stance of having to unify the island with the mainland, and the island remains an essential part of the PLA's "new historic missions," shaping its acquisitions and military planning.

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

Moreover, China's efforts to reclaim Taiwan are not limited to overt military means. The "three warfares" highlight Chinese political warfare methods, including legal warfare/lawfare, public opinion warfare, and psychological warfare. The PRC employs such approaches to undermine both Taiwan's will to resist and America's willingness to support Taiwan. The Chinese goal would be to "win without fighting"—to take Taiwan without firing a shot or with only minimal resistance before the United States could organize an effective response.

Escalation of Maritime and Territorial Disputes. The PRC and other countries in the region see active disputes over the East and South China Seas as matters of territorial sovereignty, not as differences regarding the administration of international common spaces. As a result, there exists the threat of armed conflict between China and American allies, including Japan and the Philippines, as well as nascent American security partners such as Vietnam and Indonesia.

China has escalated maritime and territorial disputes for both economic and geopolitical reasons, steadily expanding its maritime power, including its merchant marine and maritime law enforcement capabilities, and acting to secure its "near seas" as a Chinese preserve. Because its economic center of gravity is now in the coastal region, China has had to emphasize maritime power to defend key assets and areas. China increasingly depends on the seas for its economic well-being. The ability to apply pressure in disputed areas also offers China a useful geopolitical tool against rival claimant states that complements Beijing's other means of coercion and inducement such as its Belt and Road incentives. This toolset has contributed to a lack of pushback against China's effort to achieve hegemony in the Indo-Pacific, including from countries that are directly affected by China's territorial aggression.

In both the East China Sea and the South China Sea, China has sought to exploit "gray zones," gaining control incrementally and deterring others

MAP 5

Two Pacific Island Chains

SOURCE: Heritage Foundation research.

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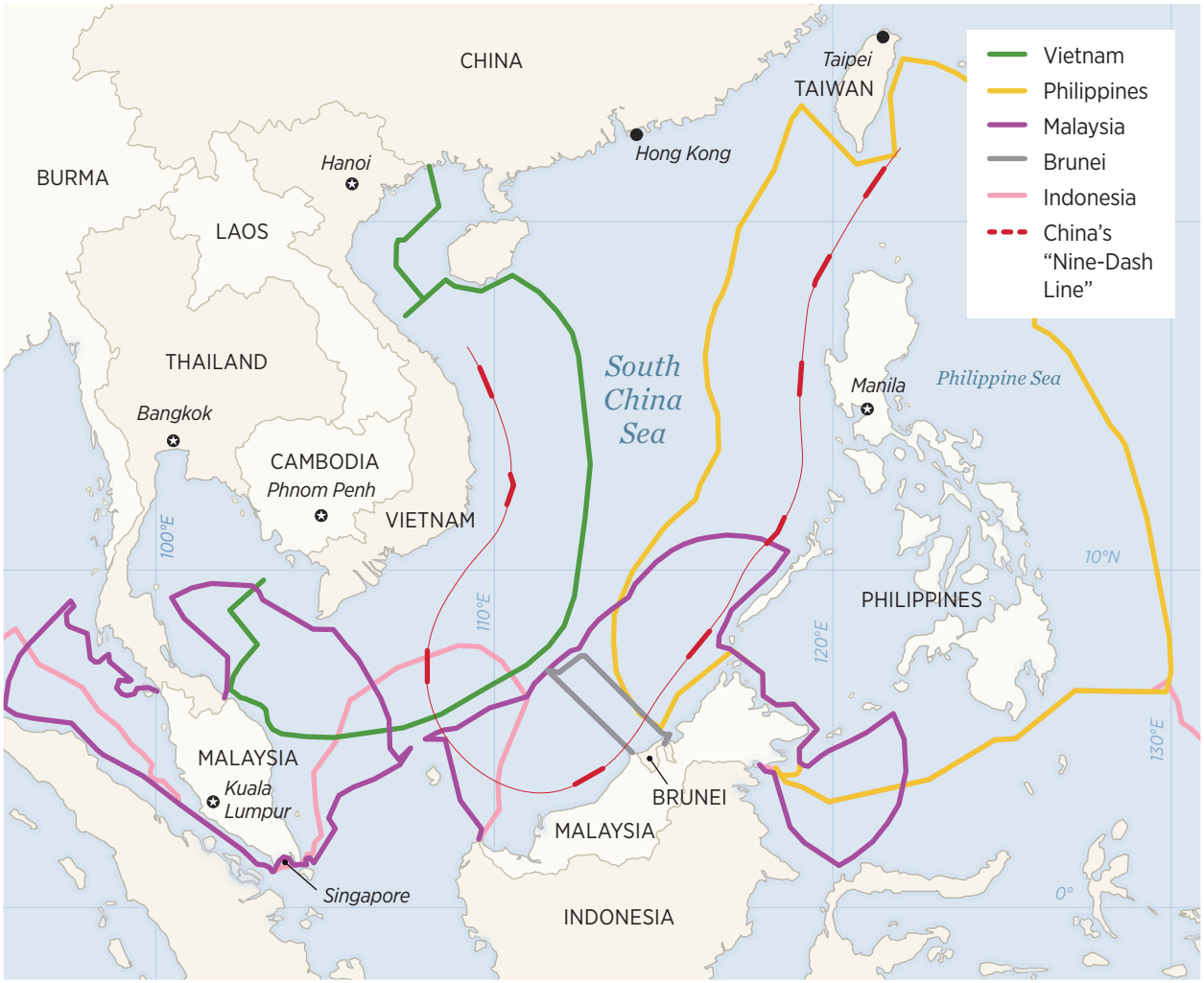
without resorting to the lethal use of force. It uses military and economic threats, bombastic language, and legal warfare (including the employment of Chinese maritime law enforcement vessels) as well as military bullying. Chinese paramilitary-implemented, military-backed encroachment in support of expansive extralegal claims could lead to an unplanned armed clash.

In the East China Sea, China has intensified its efforts to assert claims of sovereignty over the Senkaku Islands of Japan. Beijing asserts both exclusive economic rights within the disputed waters and recognition of "historic" rights to dominate and control those areas as part of its territory.[79] Chinese fishing boats (often believed to be elements of the Chinese maritime militia) and Chinese Coast Guard (CCG) vessels have been encroaching steadily on the territorial waters within 12 nautical miles of the uninhabited islands, including in 13 instances in just the first five months of 2023.[80] China first deployed a naval unit (as opposed to the CCG) within the contiguous zone of the Senkakus between 12 and 24 miles from shore in 2016.[81] Meanwhile, the CCG has routinized incursions within 12 miles of

MAP 6

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



SOURCE: Center for Strategic and International Studies, Asia Maritime Transparency Initiative, "Maritime Claims of the Indo-Pacific," https://amti.csis.org/maritime-claims-map/ (accessed September 9, 2023).

heritage.org

Senkaku features. In 2022 and 2023, the CCG set successive records for time lingering within this area: 72 hours in December 202, and more than 80 hours in April 2023.[82]

In 2013, Beijing unilaterally declared an ADIZ over the East China Sea.[83] Part of a broader pattern of using intimidation and coercion to assert expansive extralegal claims of sovereignty and/or control, China has gone on to use the ADIZ as a pretext for attempts to restrict lawful air travel over the East China Sea. For example:

- In June 2016, a Chinese fighter made an "unsafe" pass near a U.S. Air Force RC-135 reconnaissance aircraft in the East China Sea area.
- In March 2017, Chinese authorities warned the crew of an American B-1B bomber operating in the area of the ADIZ that they were flying illegally in PRC airspace, and the Chinese Foreign Ministry "urged the U.S. and other countries to respect its declared airspace."[84]

- In May 2018, the Chinese intercepted a U.S. Air Force WC-135, also over the East China Sea.[85]

- From late 2017 through 2018, Chinese vessels targeted U.S. aircraft with "blinding laser attacks" more than 20 times according to media reports citing U.S. Indo-Pacific Command.[86]

- In June 2022, a Chinese fighter jet released chaff and flares into the engines of an Australian plane.[87]

- On December 21, 2022, a PLAN J-11 fighter pilot performed an unsafe maneuver while intercepting another U.S. Air Force RC-135, coming within 20 feet of the RC-135's nose and forcing it to engage in evasive maneuvers.[88]

- On February 6, 2023, China used a laser device to blind the crew of a Philippine Coast Guard ship.[89]

- On May 26, 2023, a PRC J-16 fighter pilot performed an aggressive maneuver while intercepting a U.S. Air Force RC-135 aircraft. The RC-135 was forced to fly through its jet wake after the J-16 flew "directly in front of the [RC-135's] nose."[90]

China has asserted an illegal territorial claim to virtually the entire South China Sea, which overlaps with Bruneian, Philippine, Malaysian, Vietnamese, Indonesian, and Taiwanese claims.[91] Various of the South China Sea claimant states' proposed boundaries overlap, and this has generated long-standing political and diplomatic disagreements, but China's actions to advance its territorial ambitions and restrict other claimants' use of the area are unparalleled and have repeatedly resulted in confrontation.

The most significant development in the South China Sea since Xi Jinping assumed leadership of the Chinese Communist Party has been China's reclamation and militarization of seven artificial islands or outposts. In 2015, Xi promised President Obama that China had no intention of militarizing the islands. That pledge has never been honored.[92]

According to the DOD's 2021 annual report on the Chinese military, "[n]o substantial land has been reclaimed at any of the outposts since the PRC completed its extensive artificial manipulation in the Spratly Islands in late 2015, after adding more than 3,200 acres of land to the seven features it occupies in the Spratlys."[93] This could be taken to suggest that the process has been completed. In fact, as described by Admiral Aquilino in his March 2022 posture statement to the Senate Committee on Armed Services:

> [T]he PLA has deployed anti-ship cruise missiles, surface-to-air missiles, and jamming equipment to its artificial Spratly Islands features since 2018 and flown aircraft from those locations since 2020. The PLA has emplaced expansive military infrastructure in the SCS by building aircraft hangars sufficient to accommodate multiple fighter brigades, protective shelters for surface-to-air and anti-ship missiles, and significant fuel storage facilities.[94]

The DOD's 2022 report on the Chinese military reflects that:

- The "advanced anti-ship and anti-aircraft missile systems and military jamming equipment" on these islands are "the most capable land-based weapons systems deployed by any claimant in the disputed South China Sea to date";

- "From early 2018 through 2021, the PRC regularly utilized its Spratly Islands outposts to support naval and coast guard operations in the South China Sea"; and

- "In mid-2021, the PLA deployed an intelligence-gathering ship and a surveillance aircraft to the Spratly Islands during U.S.–Australia bilateral operations in the region."[95]

In November 2022, the Chinese coast guard deployed an inflatable boat to cut the tow line of and retrieve debris from a Chinese rocket launch that a Philippine boat was towing.[96] Most recent examples include the aforementioned blinding of a Philippine coast guard vessel and interception of an U.S. Air Force aircraft in the South China Sea.

China–Vietnam tensions have flared sporadically in the South China Sea in recent years. In 2020, CCG vessels rammed and sank Vietnamese fishing boats twice near the disputed Paracel Islands.[97] More recently, Chinese vessels have interfered

MAP 7

Chinese Fault Lines

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

East China Sea. China claims the disputed Senkaku/Diaoyu Islands, which are currently administered by Japan. In recent years, Chinese aircraft and naval vessels have entered the airspace and territorial sea around the islands with growing frequency.

Taiwan. The sovereignty of Taiwan remains unsettled. The People's Republic of China disputes this status and regularly conducts provocative military maneuvers near Taiwan.

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

SOURCE: Heritage Foundation research.

heritage.org

repeatedly with Vietnamese energy exploration blocks. One instance in May 2023 involved a 14-vessel fleet of CCG and paramilitary ships.[98] Vietnam has also protested China's decision to create additional administrative regions for the South China Sea, one centered on the Paracels and the other centered on the Spratlys.[99] This is part of Beijing's "legal warfare" efforts, which employ legal and administrative measures to underscore China's claimed control of the South China Sea region. For this reason, conflict often occurs around Chinese enforcement of unilaterally determined and announced fishing bans.[100]

Given that the United States shares a defense alliance with the Philippines, tensions between Beijing and Manila are the most likely to prompt American involvement in these disputes. There have been several volatile incidents between the two parties since the 1990s. The most contentious occurred in 2012 when a Philippine naval ship operating on behalf of the country's coast guard challenged private Chinese poachers in waters around Scarborough Shoal. The resulting escalation left Chinese government ships in control of the shoal after the U.S. helped to broker an agreement by which both sides agreed to withdraw from the standoff site. The Philippines complied; China did not.

Following the Scarborough Shoal crisis, the Philippines successfully challenged Beijing in the Permanent Court of Arbitration regarding its rights under the U.N. Convention on the Law of the Sea (UNCLOS). The tribunal found that many of China's claims in the South China Sea were unlawful. China has nevertheless ignored the ruling, and the ongoing presence of the Chinese Coast Guard around Scarborough Shoal remains a source of tension.[101]

In March and April 2021, a similar dispute arose around Whitsun Reef in the Spratlys. The presence of more than 200 Chinese fishing boats, among them known assets of China's maritime militia,[102] sparked protests from Manila. After a stay of a few weeks, which Beijing claimed was necessary because of the poor weather, most of the ships departed. The unprecedented gathering of fishing boats and maritime militia could be yet another attempt to establish a more permanent presence in the Philippines' EEZ.

The Philippines began to publicize instances of Chinese aggression at sea in 2023. In February, the Philippines condemned the CCG for "dangerous maneuvers and the use of a military-grade laser on members of the Philippine Coast Guard," who were "undertaking a mission in support of the regular rotation and resupply mission for the BRP Sierra Madre in Ayungin [Second Thomas] Shoal, the Philippines' permanent presence on the feature."[103] The Philippine Coast Guard released photo evidence of the laser incident, which reportedly temporarily blinded Philippine crewmen. In all of these cases, tensions have been exacerbated by rising Chinese nationalism.

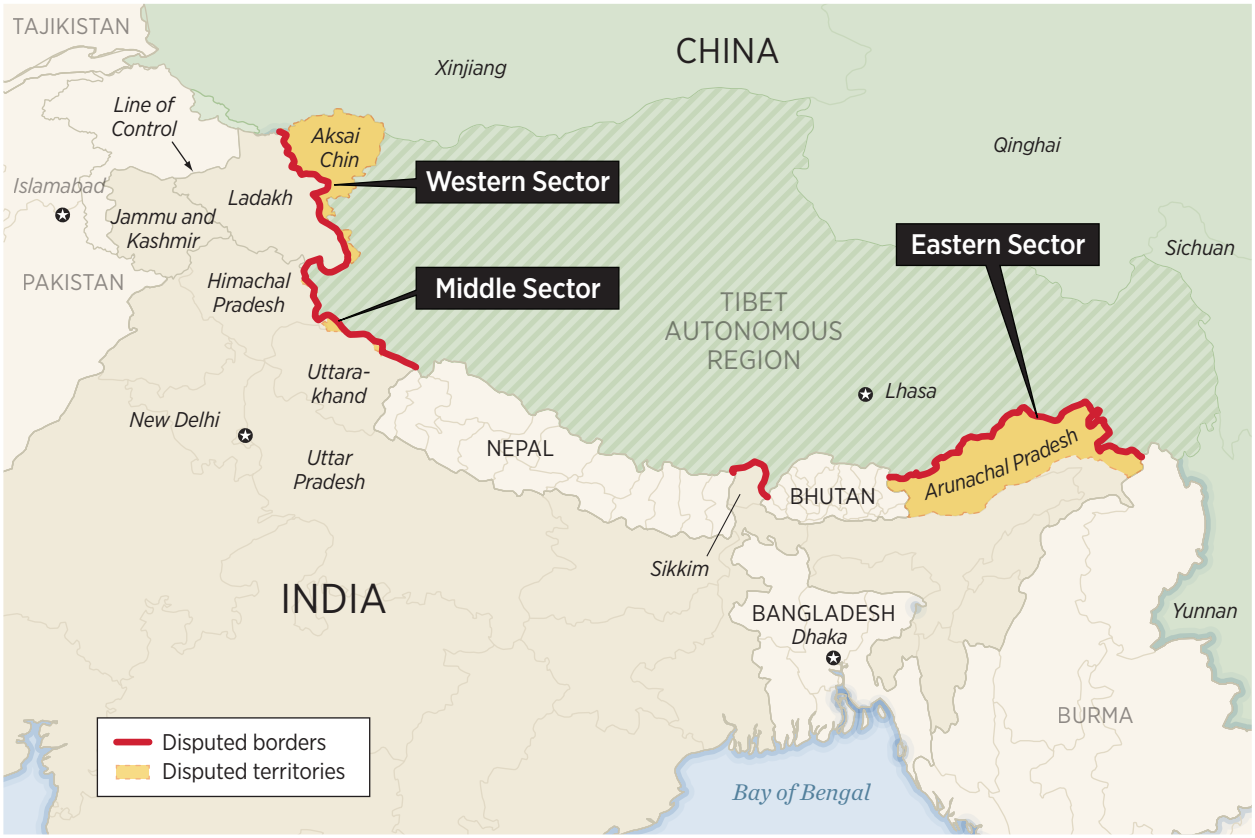
In the event of armed conflict between China and the Philippines or between China and Japan, either by design or as the result of an accidental incident at sea, the U.S. could be required to exercise its treaty commitments.[104] In recent years the U.S. government has clarified that its treaty obligations to Japan and the Philippines extend to disputed territories claimed by China. The risk of an incident escalating and involving the U.S. is a growing threat, particularly in the East and South China Seas, where naval as well as civilian law enforcement vessels from both China and the U.S. operate in what the U.S. considers to be international waters. If China ultimately tries to assert its authority by declaring an ADIZ over the entire South China Sea as some have speculated it might, its action could further increase tensions.[105]

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

Long-standing border disputes that led to a Sino–Indian war in 1962 have again become a flashpoint in recent years. In April 2013, the most serious border incident between India and China in more than two decades occurred when Chinese troops settled for three weeks several miles inside northern Indian territory on the Depsang Plains in Ladakh. A visit to India by Chinese President Xi Jinping in September 2014 was overshadowed by another flare-up in border tensions when hundreds of Chinese PLA forces reportedly set up camps in the mountainous regions of Ladakh, prompting Indian forces to deploy to forward positions in the region. This border standoff lasted three weeks until both sides agreed to pull their troops back to previous positions.

MAP 8

Disputed Borders Between India and China



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

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

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

SOURCE: Heritage Foundation research.

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In 2017, Chinese military engineers were building a road to the Doklam plateau, an area claimed by both Bhutan and China, and this led to a confrontation between Chinese and Indian forces, the latter requested by Bhutanese authorities to provide assistance. The crisis lasted 73 days. Both sides pledged to pull back, but Chinese construction efforts in the area have continued.[106] Improved Chinese infrastructure not only would give Beijing the diplomatic advantage over Bhutan, but also could make the Siliguri corridor that links the eastern Indian states with the rest of the country more vulnerable.

In June 2020, the situation escalated even further. Clashes between Indian and Chinese troops using rocks, clubs, and fists led to at least 20 Indian dead and (as the Chinese authorities later admitted) at least four Chinese killed in the Galwan Valley area of Ladakh.[107] In the years since then, dozens of rounds of negotiations between China and India have resulted in at least partial de-escalation and pullback from several standoff sites in Ladakh. However, both sides maintain elevated forward-deployed forces all along the Line of Actual Control in Ladakh, and at two sites there has been no de-escalation agreement. India claims it is engaged in the largest peacetime military deployment to one of its borders in its modern history.[108]

India also claims that China occupies more than 14,000 square miles of Indian territory in the Aksai Chin along its northern border in Kashmir, and China lays claim to more than 50,000 square miles of India's northeastern state of Arunachal Pradesh. The latter dispute is closely related to China's ongoing efforts to control Tibetan Buddhism and the presence in India of the Tibetan government in exile and spiritual leader of Buddhists worldwide, the Dalai Lama.

Threats to the Commons

Critical U.S. sea, air, space, and cyber interests are at stake in the international commons. These interests include an economic interest in the free flow of commerce and the military use of the commons to safeguard America's own security and contribute to the security of its allies and partners.

Washington has long underwritten the security of the Indo-Pacific's common areas, and this in turn has supported the region's remarkable economic development. However, China is taking increasingly aggressive steps—including the construction of islands atop previously submerged features—to advance its own interests and is pursuing expanded military access and basing globally. Two things are clear: China and the United States do not share a common conception of international space and China is actively seeking to undermine American predominance in securing international common spaces.

Dangerous Behavior in Maritime and Airspace Common Spaces. The aggressiveness of the Chinese navy, maritime law enforcement forces, and air forces in and over the waters of the East China Sea, South China Sea, and Taiwan Strait, coupled with ambiguous, extralegal territorial claims and assertion of control in these areas, poses an incipient threat to American and overlapping allied interests. Chinese military writings emphasize the importance of establishing dominance of the air and maritime domains in any future conflict.

Although the Chinese may not yet have sufficient capacity to prevent the U.S. from operating in local waters and airspace, the ability of the U.S. to operate within the First Island Chain at acceptable costs in the early stages of a conflict has become a matter of greater debate.[109] A significant factor in this calculus is the fact that China has "fully militarized at least three of several islands it built in the disputed South China Sea, arming them with anti-ship and anti-aircraft missile systems, laser and jamming equipment and fighter jets in an increasingly aggressive move that threatens all nations operating nearby."[110] China also has been intensifying its challenges to long-standing rivals Vietnam and the Philippines and has begun to push toward Indonesia's Natuna Islands and into waters claimed by Malaysia.

It is unclear whether China is yet in a position to enforce an air defense identification zone (ADIZ) consistently, but the steady two-decade improvement of the PLAAF and PLAN naval aviation will eventually yield the necessary capabilities. Chinese observations of recent conflicts, including wars in the Persian Gulf, the Balkans, Afghanistan, and now Russia's war against Ukraine, have emphasized the growing role of airpower and missiles in conducting "non-contact, non-linear, non-symmetrical" warfare.[111] This growing parity, if not superiority, constitutes a radical shift from the Cold War era when the U.S. and its allies clearly would have dominated air and naval operations in the Pacific.

China also has begun to employ nontraditional methods of challenging foreign military operations in what Beijing regards as its territorial waters and airspace. It has employed lasers, for example, against foreign air and naval platforms, endangering pilots and sailors by threatening to blind them.[112]

Chinese military aircraft have increasingly performed dangerous intercepts of American and allied aircraft in international airspace, especially since 2022.

- In June 2022, a Chinese fighter jet released chaff and flares into the engines of an Australian plane.[113]

- On June 3, 2022, in the Taiwan Strait, China further escalated its aggressive conduct when the "PLAN LUYANG III DG 132 (PRC LY 132) executed maneuvers in an unsafe manner" by crossing the USS *Chung-Hoon*'s bow twice, "violat[ing] maritime 'Rules of the Road,' of safe passage in international waters" and forcing the *Chung-Hoon* to slow "to avoid a collision."[114]

- On December 21, 2022, a PLAN J-11 fighter pilot performed a similarly unsafe maneuver while intercepting another U.S. Air Force RC-135, coming within 20 feet of the plane's nose and "forcing the RC-135 to take evasive maneuvers to avoid a collision."[115]

- Most recently, on May 26, 2023, a PRC J-16 fighter pilot performed "an unnecessarily aggressive maneuver" while intercepting a U.S. Air Force RC-135 aircraft, flying "directly in front of the nose of the RC-135" and "forcing the U.S. aircraft to fly through its wake turbulence."[116]

Expanding Global Military Footprint. As China expands its naval capabilities, it will be present farther and farther away from its home shores. In 2017, as part of this effort, it established its first formal overseas military base pursuant to an agreement with the government of Djibouti. In the years since then, China's overseas military infrastructure has continued to expand. China has laid the groundwork for a second, undeclared military base in Cambodia, is in the process of creating logistics facilities and other military construction around the world, and controls a number of dual-use commercial facilities that could support power projection in future contingencies. The U.S. Intelligence Community reportedly has concluded that China plans to "build a global military network that includes at least five overseas bases and 10 logistical support sites by 2030."[117]

In 2019, China and Cambodia reportedly signed a secret agreement providing for the PLA's use of Cambodia's Ream Naval Base.[118] While officials from both countries publicly deny plans for a Chinese base,[119] governments and public reportage have confirmed that work continues toward a significant PLA presence at Ream.[120] The 2022 DOD report on Chinese capabilities reflects that "[t]he PRC's military facility at Ream Naval Base in Cambodia will be the first PRC overseas base in the Indo-Pacific."[121] Since June 2022, China has financed significant development of Ream, including multiple new piers and buildings, dredging of the harbor to support larger ships, and site development for further construction.[122] The U.S. Treasury Department has sanctioned Chinese state-owned Union Development Group, among other reasons, for the potential militarization of nearby Dara Sakor airport.[123]

China is also pursuing or already operating additional facilities abroad for explicit military purposes. Chinese paramilitary units have operated from a base near the Afghan border in Tajikistan since at least 2016,[124] and the Tajik government reportedly has offered to transfer ownership of the facility to China in return for further military construction and aid.[125] As part of an effort to secure a military presence in the Atlantic, China has made inroads through the potential development of a naval facility in Equatorial Guinea[126] and a purported joint training facility with Gabon.[127] According to the Defense Department's 2022 report on Chinese capabilities, China "has likely considered Myanmar [Burma], Thailand, Singapore, Indonesia, Pakistan, Sri Lanka, United Arab Emirates, Kenya, Equatorial Guinea, Seychelles, Tanzania, Angola, and Tajikistan among other places as locations for PLA military logistics facilities."[128]

China is also leveraging its extensive network of commercial ports developed under Xi Jinping's Belt and Road Initiative (BRI), both for present overseas military operations and for potential future basing. Chinese firms, overwhelmingly state-owned, have participated in the development of at least 200 ports globally and have an ownership or operating interest in 95 ports.[129] According to the DOD:

> Currently, the PRC uses commercial infrastructure to support all of its military operations abroad, including the PLA's presence in other countries' territories, such as at its base in Djibouti. Some of the PRC's BRI projects could create potential military advantages, such as PLA access to selected foreign ports to pre-position the necessary logistics support to sustain naval deployments in waters as distant as the Indian Ocean, Mediterranean Sea, and Atlantic Ocean to protect its growing interests.[130]

In Sri Lanka, for example, Chinese military vessels have visited Chinese-developed commercial ports in both Colombo and Hambantota in recent years. U.S. intelligence agencies believe that since 2021, China has been building an undisclosed military facility in Abu Dhabi's Khalifa port, where Chinese state-owned shipping giant Cosco operates a terminal.[131]

Increased Military Space Activity. One of the key force multipliers for the United States is its extensive array of space-based assets. Through its various satellite constellations, the U.S. military can track opponents, coordinate friendly forces, engage in precision strikes against enemy forces, and conduct battle-damage assessments so that its munitions are expended efficiently.

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

China aims to be "a broad-based, fully capable space power" and is "second only to the U.S. in the number of operational satellites."[132]It fields an array of space capabilities, including its own BeiDou/Compass system of navigation and timing satellites, and has claimed a capacity to refuel satellites.[133] Additional investments have focused on "intelligence, surveillance, and reconnaissance (ISR), satellite communication, satellite navigation, and meteorology, as well as human spaceflight and robotic space exploration."[134] It has four satellite launch centers. China's interest in space dominance includes both accessing space and denying opponents the ability to do the same. As one Chinese assessment notes, space capabilities "provided 70 percent of battlefield communications, more than 80 percent of battlefield reconnaissance and surveillance, and 100 percent of meteorological data" for American operations in Kosovo, and "98 percent of precision-guided weapons were guided with space-based information."[135] In fact, "[i]t may be said that America's victory in the Kosovo War could not [have been] achieved without fully exploiting space."[136]

To this end, the PLA has been developing a range of anti-satellite capabilities that include both hard-kill and soft-kill systems. The former include direct-ascent kinetic-kill vehicles (DA-KKV) such as the system famously tested in 2007, but they also include more advanced systems that are believed to be capable of reaching targets in mid-Earth orbit and even geosynchronous orbit.[137] The latter include anti-satellite lasers for either dazzling or blinding purposes.[138] This is consistent with PLA doctrinal writings, which emphasize the need to control space in future conflicts. "Securing space dominance has already become the prerequisite for establishing information, air, and maritime dominance," says one Chinese teaching manual, "and will directly affect the course and outcome of wars."[139]

Orbital threats are growing as well. The Shijian-17 satellite has a robotic arm that can physically redirect satellites. In January 2022, the Shijian-21 "moved a derelict BeiDou navigation satellite to a high graveyard orbit above GEO."[140]

It should also be noted that soft-kill attacks need not come only from dedicated weapons. The case of Galaxy-15, a communications satellite owned by Intelsat Corporation, showed how a satellite could disrupt communications simply by always being in "switched on" mode.[141] Before it was finally brought under control, it had drifted through a portion of the geosynchronous belt, forcing other satellite owners to move their assets and juggle frequencies. A deliberate such attempt by China (or any other country) could prove far harder to handle, especially if conducted in conjunction with attacks by kinetic systems or directed-energy weapons.

Most recently, China has landed an unmanned probe at the lunar south pole on the far side of the Moon. This is a major accomplishment because the probe is the first spacecraft ever to land at either of the Moon's poles. To support this mission, the Chinese deployed a data relay satellite to Lagrange Point-2, one of five points where the gravity wells of the Earth and Sun "cancel out" each other, allowing a satellite to remain in a relatively fixed location with minimal fuel consumption. While the satellite itself may or may not have military roles, the deployment highlights that China will now be using the enormous volume of cis-lunar space (the region between the Earth and the Moon) for various

deployments. This will greatly complicate American space situational awareness efforts by forcing the U.S. to monitor a vastly greater area of space for possible Chinese spacecraft. The Chang'e-5 lunar sample retrieval mission in 2020 and China's recent landing on Mars underscore the PRC's effort to move beyond Earth orbit to cis-lunar and interplanetary space.

Cyber Activities and the Electromagnetic Domain. As far back as 2013, the Verizon Risk Center identified China as the "top external actor from which [computer] breaches emanated, representing 30 percent of cases where country-of-origin could be determined."[142] Given the difficulties of attribution, country of origin should not necessarily be conflated with perpetrator, but forensic efforts have associated at least one Chinese military unit with cyber intrusions, albeit many years ago.[143] The Verizon report similarly concluded that China was the source of 95 percent of state-sponsored cyber espionage attacks.

Since the 2015 summit meeting between Chinese President Xi Jinping and U.S. President Barack Obama, during which the two sides reached an understanding to reduce cyber economic espionage, Chinese cyber actions have shifted. Although the overall level of activity appears to be unabated, the Chinese seem to have moved toward more focused attacks mounted from new sites.

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

This is not to suggest that the PLA has not emphasized the military importance of cyber warfare. Chinese military writings since the 1990s have emphasized a fundamental transformation in global military affairs. Future wars will be conducted through joint operations involving multiple services, not through combined operations focused on multiple branches within a single service, and will span outer space and cyberspace in addition to the traditional land, sea, and air domains. Outer space and cyberspace will be of special importance because the introduction of information technology into all areas of military operations has caused the goal of warfare to move beyond establishing material dominance (characteristic of industrial-age warfare) to include establishing information dominance.

Consequently, according to PLA analysis, future wars will most likely be "informationized local wars." That is, they will be wars in which information and information technology will be both widely applied and a key basis of victory. The ability to gather, transmit, analyze, manage, and exploit information will be central to winning such wars: The side that is able to do these things more accurately and more quickly will be the side that wins. This means that future conflicts will no longer be determined by platform-versus-platform performance and not even by system against system: Conflicts are now clashes between rival systems of systems.[144]

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

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

Information operations involve four mission areas:

- **Command and Control Missions.** The ability of commanders to control joint operations by disparate forces is essential to the success of information operations. Command, control, communications, computers, intelligence, surveillance, and reconnaissance structures

therefore constitute a key part of information operations by providing the means for collecting, transmitting, and managing information.

- **Offensive Information Missions.** These are intended to disrupt the enemy's battlefield command and control systems and communications networks as well as to strike the enemy's psychological defenses.

- **Defensive Information Missions.** Such missions are aimed at ensuring the survival and continued operation of information systems. They include deterring an opponent from attacking one's own information systems, concealing information, and combating attacks when they do occur.

- **Information Support and Information-Safeguarding Missions.** The ability to provide the myriad types of information necessary to support extensive joint operations and to do so on a continuous basis is essential to their success.[145]

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

Finally, computer network operations will not stand alone; they will be integrated with electronic warfare operations as reflected in the phrase "network and electronics unified." Electronic warfare operations are aimed at weakening or destroying enemy electronic facilities and systems while defending one's own.[146] Techniques include jamming and anti-jamming technologies that deny space-based communications, radar systems, and GPS navigation.[147] The combination of electronic and computer network attacks will produce synergies that affect everything from finding and assessing the adversary to locating one's own forces, weapons guidance, logistical support, and command and control. The creation of the PLASSF is intended to integrate these forces and make them more complementary and effective in future "local wars under informationized conditions."

Conclusion

China presents the United States with its most comprehensive and daunting national security challenge across all three areas of vital American national interests: the homeland; regional war (including potential attacks on overseas U.S. bases as well as against allies and partners); and international common spaces. China is challenging the U.S. and its allies at sea, in the air, and in cyberspace. It has sparked deadly confrontations on its border with India and poses a standing and escalating threat to Taiwan.

The Chinese military is no longer a distant competitor for the U.S. China has begun to field indigenous aircraft carriers and advanced missile technology. It is rapidly expanding its nuclear arsenal and conducting live-fire exercises and mock blockades around Taiwan. If current trends persist, the gap between the Chinese and U.S. militaries is likely to narrow further, and the possibility that China might surpass U.S. capabilities in some fields is no longer implausible.

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

Threats: China

	HOSTILE	AGGRESSIVE	TESTING	ASSERTIVE	BENIGN
Behavior		✓			

	FORMIDABLE	GATHERING	CAPABLE	ASPIRATIONAL	MARGINAL
Capability	✓				

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