SECTION 2: CHINA'S GROWING POWER PROJECTION AND EXPEDITIONARY CAPABILITIES

Key Findings

- Recent advances in equipment, organization, and logistics have significantly improved the People's Liberation Army's (PLA) ability to project power and deploy expeditionary forces far from China's shores. A concurrent evolution in military strategy requires the force to become capable of operating anywhere around the globe and of contesting the U.S. military if called upon to do so. Chinese leaders have vigorously pushed the PLA to develop power projection and expeditionary capabilities over the last 20 years.
- China's power projection capabilities are developing at a brisk and consistent pace, reflecting the civilian leadership's determination to transform the PLA into a global expeditionary force in a matter of decades. In the short term (next five years), the PLA will focus on consolidating the capabilities that would enable it to conduct large-scale military operations around its maritime periphery. In the medium term (next 10–15 years), the PLA aims to be capable of fighting a limited war overseas to protect its interests in countries participating in the Belt and Road Initiative (BRI). By mid-century, the PLA aims to be capable of rapidly deploying forces anywhere in the world.
- China's basing model includes military facilities operated exclusively by the PLA as well as civilian ports operated or majority-owned by Chinese firms, which may become dual-use logistics facilities. Chinese firms partially own or operate nearly 100 ports globally, more than half of which involve a Chinese state-owned enterprise (SOE).
- Despite the PLA's progress in building expeditionary capabilities, it continues to face a number of challenges in projecting power. These challenges grow more pronounced the farther away the PLA operates from China's immediate periphery and include inadequate airlift, sealift, at-sea replenishment, and in-air refueling capabilities.
- China's power projection capabilities are robust in East and Southeast Asia, where it is building military bases. In the Indian Ocean, the PLA deploys naval task forces that regularly operate for seven to eight months as far away as Africa's eastern seaboard. While the PLA's power projection capabilities diminish the farther it operates from China, it is beginning

to develop the ability to project power in the South Atlantic, where it occasionally conducts naval operations, makes port calls, and carries out military exercises with local partners. In Latin America and the Caribbean, where PLA power projection capabilities are weakest, the force is cultivating political influence and greater access to the region that will complement the satellite tracking station it already maintains in Argentina.

Introduction

China has made recent changes to its military strategy, equipment, and global posture that enable it to project power at greater distances from its shores. Following four decades of military modernization and his predecessor's guidance that the PLA safeguard the Chinese Communist Party's (CCP) expanding global interests, General Secretary of the CCP Xi Jinping has prioritized the development of what he calls a "world-class military" to support his ambitions for national rejuvenation.[1] PLA strategists argue that a world-class military must possess a blue-water navy as well as air and ground forces capable of conducting expeditionary operations on faraway continents.[2] The PLA has sought to develop these capabilities by making significant changes to its equipment, training, and internal organization according to a timeline that envisions China projecting forces around the globe by the middle of the century. Two unique and important dimensions of the PLA's capability-building efforts are its incorporation of emerging technologies, particularly in the cyber and space domains, and its reliance on ostensibly civilian entities as a force enabler.

CCP leaders see the PLA as having three main strategic requirements related to the projection of military power: defending sovereign territory as the CCP defines it; delaying or denying potential threats or intervention by other powers, such as the United States; and protecting China's overseas economic interests, which include sea lines of communication (SLOCs). They also want the PLA to support activities in the gray zone and to use its military assets for political signaling.

While the PLA already possesses robust power projection capabilities in East and Southeast Asia, it is working to establish the capability to project power and conduct expeditionary operations in the Indian Ocean region, Africa, and even as far as Latin America and the Caribbean. To prepare the groundwork for a future network of overseas military bases and dual-use logistics facilities, the PLA uses its soft power—in the form of traditional military diplomacy and humanitarian activities—to burnish its image and sway local officials. The PLA's attempts to generate such soft power reinforces China's broader influence-building activities in BRI countries and around the world.

This section first examines why China is developing power projection and expeditionary capabilities before assessing how changes to equipment, force structure, and the PLA's use of civilian assets will enable it to develop these capabilities. It then surveys the PLA's global power projection activities spanning the Taiwan Strait to Latin America and the Caribbean. The section

concludes by considering the implications of the PLA's growing power projection and expeditionary capabilities for the United States. This section is based on the Commission's February 2020 hearing on this topic, contracted research, as well as open source research and analysis.

Power Projection Serves Beijing's Strategic Requirements

China's pursuit of power projection and expeditionary capabilities is driven primarily by three strategic requirements the CCP feels it must address to manage threats and opportunities in its security environment. One of these strategic requirements—resolving territorial disputes—has existed since the People's Republic of China's establishment in 1949. By contrast, the second and third—denying U.S. forces space to operate and protecting overseas commercial interests—emerged in the 1990s as Beijing refocused its attention on the United States as its primary military threat and China became integrated with the global economy. Indeed, it was only in the last 20 years that the PLA fielded capabilities allowing any significant degree of power projection.

Defining Power Projection and Expeditionary Capabilities

The U.S. Department of Defense (DOD) defines power projection as "the ability of a nation … to rapidly and effectively deploy and sustain forces in and from multiple dispersed locations to respond to crises, to contribute to deterrence, and to enhance regional stability."[3] An important subset of power projection is expeditionary warfare, which DOD defines as "military operations conducted by an armed force to accomplish a specific objective in a foreign country."[4]

China's power projection activities fall into four categories, Admiral (Ret.) Dennis Blair testified to the Commission. The first type of activity, which is the most peaceful and smallest in scale, includes "rescue operations, humanitarian response and peace[keeping] operations (PKOs)," such as China's PKOs in Africa and its noncombatant evacuation operations in Yemen and Libya. The second type is "symbolic show[s] of force, political intervention, and coercive threat[s]," such as China's visits to foreign ports and submarine deployments to the Indian Ocean. The third type is the "protection of trade" through the deployment of vessels to guard SLOCs, such as China's antipiracy operations in the Gulf of Aden. The fourth type, which is the most aggressive and largest in scale, is a "punitive attack" on another country's territory, such as China's 1979 invasion of Vietnam.[5]

Today's PLA regularly projects power abroad in every category except the fourth, but its rapid development of new strategies and equipment, as well as its changed global posture, demonstrate that Chinese leaders wish at minimum to possess the capacity for all types of power projection. Military presence and military diplomacy are precursors to and enablers of power projection, but not types of power projection themselves.

For Country, Wealth, and Glory: China's Strategic Requirements

The first and most urgent of Beijing's strategic requirements involving the need for power projection capabilities is the requirement to resolve outstanding territorial disputes in its favor. Since the Kuomintang (Nationalists) fled the Mainland for Taiwan in 1949, the CCP has viewed the island's government as a direct challenge to the legitimacy of its claim to rule all of China.[6] Taiwan's economic development and subsequent transition to a multiparty democracy magnified that threat by undermining the CCP's argument that only an authoritarian government could bring stability and prosperity to China. The PLA accordingly regards Taiwan as its "main strategic direction" for military planning and refuses to renounce the use of force against the island.[7] Beijing is also embroiled in disputes over sovereignty and resource exploitation with its neighbors in the East and South China seas, two other important "strategic directions" for the PLA.[8] To annex Taiwan, the Senkaku Islands administered by Japan, or the South China Sea features claimed by Vietnam and the Philippines, the PLA must be able to transport troops and equipment over large bodies of water and support them with air and naval power. These are tasks the force has historically struggled to achieve due to shortfalls in amphibious lift and related capabilities.

China's second strategic requirement is to deny U.S. forces access to or delay their arrival in a potential East Asian contingency. The United States' dispatch of two aircraft carrier battle groups to the region during the Third Taiwan Strait Crisis in 1995–1996 forced Chinese leaders to acknowledge there was little they could do to stop the United States from coming to Taiwan's aid or otherwise operating in China's immediate vicinity.[9] They responded by accelerating a campaign already underway to develop PLA capabilities that could prevent or constrain the deployment of U.S. forces to the East Asian theater, a strategy later described by U.S. analysts as "anti-access and area-denial" (A2/AD).* For most of the early 2000s, China's focus remained within the so-called "first island chain" (see Figure 1), but by 2013 authoritative PLA sources were discussing the need to keep the enemy as far from mainland China as possible.[10] The 2013 edition of the publication *Science of Military Strategy*, for example, called on the PLA to "push the strategic forward edge from the home territory to the periphery, from land to sea, from air to space, and from tangible spaces to intangible spaces."[11]

China's third strategic requirement is to defend its overseas economic interests. These include the security of Chinese assets and people abroad as well as access to foreign markets, natural resources, and advanced technologies. Then General Secretary Jiang Zemin's direction to Chinese enterprises to invest overseas under the auspices of his 1999 "Going Out" strategy marked the point at which

*Anti-access actions are intended to slow the deployment of an adversary's forces into a theater or cause them to operate at distances farther from the conflict than they would prefer. Area denial actions affect maneuvers within a theater and are intended to impede an adversary's operations in key areas. Luis Simon, "Demystifying the A2/AD Buzz," *War on the Rocks*, January 4, 2017; U.S. Department of Defense, *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2013*, 2013, 32–33; U.S. Department of Defense, *Air-Sea Battle: Service Collaboration to Address Anti-Access & Area Denial Challenges*, May 2013, 2; Andrew Krepinevich, Barry Watts, and Robert Work, "Meeting the Anti-Access and Area-Denial Challenge," *Center for Strategic and Budgetary Assessments*, 2003.

Figure 1: First and Second Island Chains

Source: Created for the U.S.-China Economic and Security Review Commission; adapted from U.S. Department of Defense, *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2012*, May 2012, 40.

China's economic interests became truly international, and political guidance to the PLA in the decade and half afterward emphasized the need for a military capable of defending those interests. The 2015 defense white paper stated that the security of China's "energy and resources, SLOCs, as well as institutions, personnel and assets abroad" had become an "imminent issue" for the PLA.*[12]

*Beijing views the protection of SLOCs as particularly important among its various economic interests. Approximately 80 percent of China's oil imports, 25 percent of global maritime cargo, and 33 percent of global maritime traffic pass through the Indian and Pacific oceans. Tom Guorui Sun and Alex Payette, "China's Two Ocean Strategy: Controlling Waterways and the New Silk Road," *Asia Focus* 31 (May 2017): 5–6.

The PLA Goes Global: Chinese Leaders Task the PLA with Overseas Missions

Chinese leaders have vigorously pushed the PLA to develop power projection and expeditionary capabilities over the last 20 years.* General Secretary Xi has followed this tradition by emphasizing the importance of China's global reach and pushing for changes to the PLA's strategy, planning, force development, and operations.

Since becoming paramount leader in 2012, General Secretary Xi has consistently emphasized that a global PLA must underpin his "China dream" of "national rejuvenation" as a great power. In remarks before the CCP's 19th National Congress in October 2017, for example, he pledged to build the PLA into a "world-class" force by mid-century, one capable not only of enforcing Beijing's sovereignty claims in the Indo-Pacific region but also of defending China's interests throughout the world.[13] Major defense policy documents published under General Secretary Xi reflect his intent to transform the PLA into a force capable of robust overseas military operations. For example, China's 2019 defense white paper characterized overseas interests as "crucial" and the PLA's efforts to build a far seas navy, construct overseas logistics facilities, and conduct maritime operations as important "mechanisms for protecting China's overseas interests."[14]

The PLA's Timeline for Power Projection

One authoritative PLA source suggests the development of China's power projection capabilities will proceed according to a timeline. Central Military Commission Transport and Projection Bureau Chief of Staff Liu Jiasheng wrote in a February 2019 PLA journal article that China's power projection would occur in short-, medium-, and long-term phases.[15] In the short term, he wrote, the PLA must be ready to fight a limited war in the maritime domain around China's periphery requiring robust sea and air lift forces. In the medium term, the PLA must be able to fight a limited war overseas to protect its interests in countries participating in BRI. In the long term, the PLA must focus on "global projection," making use of China's overseas bases as well as air and space assets to be prepared to rapidly deploy anywhere around the globe. While Liu did not define the short, medium, and long term, these periods may correspond to the PLA's deadlines for achieving full mechanization by 2020, becoming "modern" by 2035, and becoming "world class" by mid-century.[16] (For more on the PLA's efforts to meet its 2020 mechanization goal, see Chapter 3, Section 1, "Year in Review: Security, Politics, and Foreign Affairs.")

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*Then General Secretary Hu Jintao's promulgation of the "new historic missions" in 2004 was the first time the CCP expanded the armed forces' traditional missions to include operations well beyond China and its immediate periphery. Globalization and changes in modern technology had caused China's national security interests "to gradually extend beyond traditional territories, territorial seas, and airspace," then General Secretary Hu told the PLA in a December 2004 speech. The PLA now needed to be capable of protecting its interests in the maritime, space, and electromagnetic domains—tasks it should carry out alongside an ambitious new charge to "uphold world peace." His redefinition of China's role as a global security provider hinted at the global ambitions that expeditionary capabilities were ultimately intended to underpin. The PLA began operating regularly beyond East Asia with the advent of the Gulf of Aden antipiracy task forces in 2008 and made changes to its force structure, personnel assignments, doctrine, and exercises to build the capabilities for these newly assigned missions. Hu Jintao, "Recognize the Historic Missions of Our Army in the New Stage of the New Century" (认清新世纪新阶段我军历史使命), *Jiangxi National Defense Education Net*, December 24, 2004. Translation.

Coupled with General Secretary Xi's January 2019 call to build a BRI "system of security guarantees" and PLA writings portraying BRI as a strategy to expand China's "strategic depth," Liu's timeline suggests China's intention to transform some BRI-financed projects into logistical platforms for a military presence.[17] Deputy Assistant Secretary of Defense for China Chad Sbragia testified to the Commission that DOD is increasingly concerned about the conversion of BRI projects such as ports into "strategic platforms for military access," noting that such facilities may appear in the Middle East, Africa, Southeast Asia, the western Pacific, and even the Arctic.[18] Creating the basis for future military access is a key driver behind the PLA's robust efforts to expand its presence, influence, and image in BRI countries in recent years.

Building a Nascent Global Force

The PLA is currently capable of most lower-end types of power projection beyond China's borders and is actively working to rectify shortfalls in six key operational areas so it can project power more robustly and at greater distances in the future. These areas include amphibious assault; naval power projection; air power projection and delivery; long-range precision strike; global logistics; and global command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR). The PLA sought to address these limitations in its 2015 reorganization and has improved its ability to deploy forces abroad in particular by commissioning advanced multimission warships,* aircraft designed for long-distance operations, and long-range ground-launched missiles. China's ISR satellites and ground-based cyber architecture also enable the PLA's global operations. Finally, the country's base in Djibouti and expanding access to ports and airfields constitute an anchor from which Beijing can project power.

Current Capabilities: Conducting Military Operations Short of Major Conflict

China is already capable of executing a range of small-scale military operations that enable power projection far beyond its borders. According to Admiral Blair, today's PLA can conduct humanitarian response and peacekeeping operations; symbolic shows of force, political intervention, and coercive threats; and the protection of trade.[19] Between 2012 and 2018, the PLA participated in at least 11 humanitarian assistance/disaster relief operations abroad, which provided it with opportunities to deploy throughout the Indo-Pacific, Africa, and the Middle East.[20] The PLA's deployment of infantry units and other personnel on overseas PKO missions has helped it develop logistics capabilities, gain experience operating in unfamiliar environments, and learn how to interact with foreign militaries and multilateral organizations.

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*In contrast to the PLA Navy's older and mostly single-purpose ships, multimission ships typically are capable of operating at greater ranges from the coast and conducting two or more types of naval warfare due to their improved antiship, anti-air, and anti-submarine weapons and sensors. U.S. Department of Defense, *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2018*, May 16, 2018, 28; Michael S. Chase et al., "China's Incomplete Military Transformation: Assessing the Weaknesses of the People's Liberation Army (PLA)," *RAND Corporation* (prepared for the U.S.-China Economic and Security Review Commission), 2015, 13–18.

Much of the PLA's significant operational experience has come from the PLA Navy's regular participation in the Gulf of Aden antipiracy operations since 2008. These operations have improved the PLA's ability to gain experience sustaining operations at long distances from China's shores, refueling at foreign ports, and integrating naval intelligence into operations.[21] During this same timeframe, the PLA Navy has also increased its familiarity with foreign environments by conducting routine operations such as patrols, training, port calls, and exercises outside its near seas.[22] Even so, projecting power over long distances is a relatively new accomplishment; it was only in 2009 under the auspices of a military exercise called Stride-2009 that the PLA demonstrated for the first time that it could quickly transport a division-sized force across long distances within China's borders.[23]

The PLA has more limited power projection capabilities in distant regions. Chad Peltier, a senior analyst at defense research firm Janes, testified to the Commission that today's PLA is capable of deploying a three-ship task force for approximately seven to eight months as far as Africa's eastern seaboard.[24] The force, however, would face challenges sustaining combat operations at this distance for more than two weeks.[25] Independent analyst Kevin McCauley testified to the Commission that the PLA's recent encounter with logistics problems while providing equipment to a small peacekeeping force in South Sudan indicates that support for a larger expeditionary operation in combat conditions would present the PLA with significant difficulties.[26] The PLA will likely be capable of responding to limited contingencies overseas with its more substantial airlift fleet by 2035, but it will probably struggle to sustain prolonged offensive combat operations.[27] Moreover, the PLA has yet to clarify command and control for joint operations beyond China's borders. Despite efforts to resolve the problem during the 2015 reorganization, the force has not specified how responsibility for units in distant regions will be allocated among the theater commands, services, and Central Military Commission.[28]

Space and Cyber Operations: Power Projection in the 21st Century

China has achieved space-based and cyber capabilities that can be employed independently or with traditional maritime, air, and ground forces to enhance China's power projection and expeditionary operations. The 2013 *Science of Military Strategy* anticipates future wars will begin in space and cyberspace, arguing that "seizing command of space and network dominance will become crucial for obtaining comprehensive superiority on the battlefield and conquering an enemy."[29] Space is of growing importance to the PLA for situational awareness, intelligence, and command and control. China's constellation of over 120 ISR satellites—numbering second only to the United States—enhances the PLA's global situational awareness by providing mapping, ground and maritime surveillance, imag-

Space and Cyber Operations: Power Projection in the 21st Century—*Continued*

ery, and intelligence data.*[30] In June 2020, China completed its global Beidou satellite navigation system, bolstering the PLA's command and control capabilities by providing deployed commanders with enhanced situational awareness and a short messaging service for communication.[31]

China also has a growing number of land- and sea-based space tracking assets that support targeting for PLA counterspace weapons systems, tracking missile launches, and collecting intelligence on U.S. and allied troop movements.[32] Some of China's terrestrial satellite tracking stations in Africa and Latin America are fully controlled and operated by the PLA's Strategic Support Force, improving tracking of U.S. satellites and providing locations from which to collect intelligence on troop movements of the United States and its allies and partners.†[33]

PLA strategists view the cyber domain as particularly critical to power projection, and China's dominance of global telecommunications infrastructure could bolster that capability.[34] Under China's 2017 National Intelligence Law and 2014 Counter-Espionage Law, for example, Chinese firms involved in constructing the undersea cables that carry most of the world's telecommunications data are required to provide data on their networks to the government if requested.[35] Moreover, China's dominance of global internet communications technology infrastructure, combined with its push to set global technology standards and its military-civil fusion strategy, may enhance the PLA's ability to disrupt command and control networks and spy on foreign countries.[36]

Training and Equipping the PLA for Expeditionary Operations

China's rapid introduction of modern ships and aircraft as well as its reorganization and training of the PLA's services have all facilitated the PLA's development of expeditionary capabilities. Nonetheless, the Chinese military's expeditionary capabilities have considerable room for improvement due to challenges such as inadequate underway replenishment, amphibious lift, and strategic lift capabilities, as well as a shortage of advanced naval helicopters.

Growing Long-Range Amphibious Assault Capabilities

An important step in China's development of expeditionary capabilities is its rapid commissioning of amphibious assault ships. These ships are crucial for a Taiwan conflict, various contingencies

*China also has over 30 communications satellites, with four solely for military use. Defense Intelligence Agency, *Challenges to Security in Space*, February 11, 2019, 18–19.

†China has built or has access to satellite tracking and control stations in Pakistan, Namibia, Kenya, Australia, Chile, and Argentina, complementing its 21 stations in China and the PLA Navy's YUANWANG-class satellite-tracking ships. *Xinhua*, "China's Yuanwang-7 Departs for Space Monitoring Missions," May 3, 2019; Cassandra Garrison, "China's Military-Run Space Station in Argentina Is a Black Box," *Reuters*, January 31, 2019; Kevin Pollpeter et al., "China Dream, Space Dream: China's Progress in Space Technologies and Implications for the United States" (prepared for the U.S.-China Economic and Security Review Commission), March 2, 2015, 109.

in the East and South China seas, and expeditionary operations far from China's shores.[37] The Type 075 (YUSHEN-class) flattop landing helicopter dock will enable the PLA Navy to deploy its marine corps globally, with the first two ships of its class expected to enter service by 2021 or 2022.[38] The Type 075, which has an estimated displacement of 35,000 tons and space for up to 30 helicopters, will be the largest and most capable amphibious assault ship in China's fleet.* This new class of landing helicopter docks will complement the Type 071 (YUZHAO-class), five of which are in service and at least two more of which are under construction.[39]

China is also tasking the PLA Navy Marines with a mission to support expeditionary operations. According to the first commander of the recently established PLA Navy Marines Headquarters, Beijing has directed the force to serve as a "strategic dagger" to expand China's influence and defeat U.S. intervention if needed, implying support for global expeditionary capabilities.[40] Like the PLA Army, the PLA Navy Marines' restructuring into modular brigades and battalions will increase its flexibility to deploy for more diverse missions.[41] Traditionally focused on the near seas, the PLA Navy Marines' missions now include land, sea, and air operations such as manning the PLA base in Djibouti and providing forces to the Gulf of Aden task forces.[42] Moreover, the PLA Navy Marines has tripled in size from a force of 10,000 to over 30,000 marines since late 2015, though the newly added marines are still being trained and equipped.[43] The sizeable increase of the force has occurred in tandem with changes to its training. Since 2014, the PLA Navy Marines has shifted its training pattern from a focus on island and reef landing operations to cross-theater exercises in diverse terrains and climates.†

The PLA Navy is likely capable of executing a range of expeditionary missions in China's periphery, such as a punitive missile strike, blockade, or seizure of small disputed features in the South China Sea. The PLA, however, still lacks the capability to execute a full-scale invasion of Taiwan and would likely rely on civilian assets, cyberattacks, and special forces to supplement a traditional amphibious assault.[44] (For a more extensive discussion of the PLA's capabilities for executing an invasion of Taiwan, see Chapter 4, "Taiwan.") Another obstacle is the limited quantity of helicopters (both assault and transport) available for deployment on PLA Navy ships. Mr. Peltier assesses China's amphibious assault capabilities will "remain substandard" for the next five to ten years as the PLA Navy, Marines, and Army compete for these helicopters.[45]

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*The Type 075's estimated displacement is at least 50 percent larger than the YUZHAO-class (Type 071) amphibious ship, and it can reportedly carry between 25 and 30 helicopters compared to the Type 071's four. Ronald O'Rourke, "China's Naval Modernization: Implications for U.S. Naval Capabilities—Background and Issues for Congress," *Congressional Research Service*, March 18, 2020, 17; Kyle Mizokami, "China Launches Its First Amphibious Assault Ship," *Popular Mechanics*, October 2, 2019; Rick Joe, "The Future of China's Amphibious Assault Fleet," *Diplomat*, July 17, 2019.

†In 2018, the PLA Navy Marines conducted its largest transregional exercise to date involving 10,000 marines operating in mountainous terrain and subtropical climates using air, water, rail, and motor transport. Other exercises in recent years have involved cold weather as well as desert, forest, and plateau terrains, suggesting the PLA Navy Marines will underpin expeditionary operations in a land contingency. Dennis J. Blasko and Roderick Lee, "The Chinese Navy's Marine Corps: Chain-of-Command Reforms and Evolving Training," *China Brief*, February 15, 2019; *China Military Online*, "PLA Marine Corps Conducts Massive Groundbreaking Maneuvers," March 16, 2018.

Janes Assesses PLA Expeditionary Capabilities Will Greatly Improve by 2035

According to a report prepared for the Commission by Janes, the PLA Navy Marines is developing the capability to conduct organic amphibious combat operations similar to those carried out by the U.S. Marine Corps, while the PLA Navy is bolstering its ability to project power and support these operations. China is likely capable of six-month deployments of two amphibious task forces composed of approximately four infantry battalions across four landing platform docks.[46] By 2035, the PLA could triple its deployable amphibious task forces from two to six, with each task force possessing roughly the same number of ships, personnel, and capacity to sustain operations as one U.S. marine expeditionary unit. Such task forces would comprise an amphibious assault ship, a landing platform dock, a landing helicopter dock, and associated amphibious weapons systems that could carry up to 36 helicopters, ten landing craft air cushions, and 30 amphibious infantry fighting vehicles.[47] Each task force would carry about 2,500 sailors and marines and be capable of sustaining combat operations for up to 15 days while deployed on six-month rotations as far as the Middle East.[48] A typical U.S. marine expeditionary unit contains 2,600 personnel and is capable of sustaining operations for 15 days without external support.[49]

Janes assesses the PLA Navy will become a "significantly more formidable force" by 2035 but will probably not have the number of warships and support ships necessary to sustain a protracted overseas campaign. The PLA Navy's force structure will likely increase from two to as many as six aircraft carriers and from one to twelve Type 055 destroyers by 2035.[50] These ships will probably focus on protecting China's overseas investments, including "overseas infrastructure, sea lanes, and overseas [Chinese] nationals," according to Janes.[51]

Carriers and Multimission Ships Advance the PLA's Ability to Project and Sustain Power

The PLA Navy now ranks second only to the United States in terms of the number of blue-water-capable ships, or those designed for operations on the high seas, due to China's commissioning of advanced multimission ships over its decades-long naval modernization.* Aircraft carriers and large multimission ships complement the PLA Navy's growing amphibious assault capabilities and are major power projection platforms themselves. In December 2019, China commissioned its second aircraft carrier, *Shandong* (Type 002), which joined the refurbished *Liaoning* (Type 001) in the PLA Navy's fleet.[52] *Shandong* is China's first indigenously produced aircraft carrier and has a slightly larger displacement than *Liaoning*, which allows it to carry about four more fixed-wing aircraft or eight

*According to Admiral (Ret.) Michael McDevitt, China is expected to have 131 blue-water-capable ships commissioned or in the fitting-out stage by 2021, far exceeding those of other regional militaries. By comparison, the United States is expected to have 236 such ships. Michael McDevitt, written testimony for the U.S. House Armed Services Committee, *Hearing on DOD's Role Competing with China*, January 15, 2020, 9–10.

more helicopters than the older vessel.[53] Both carriers' ski-jump design limits the fuel and munitions with which a carrier-launched fighter jet can take off, thus restricting *Shandong* and *Liaoning* to air defense and potentially anti-submarine warfare operations.[54] Mr. Peltier asserts the PLA Navy will probably wait for the introduction of its third aircraft carrier before undertaking expeditionary operations outside its near seas.[55] This aircraft carrier, which is currently under construction and expected to be operational by 2022, reportedly uses a flat deck design and an electromagnetic catapult similar to those found on certain classes of U.S. aircraft carriers.[56] The catapult system would allow the PLA Navy to employ aircraft to support long-range maritime strike and land-attack missions.[57]

Multimission combat ships are also critical for escorting China's amphibious ships beyond its shores. The PLA Navy's commissioning of these surface combatants within the last 15 years has significantly improved China's far seas power projection capabilities. In January 2020, China commissioned its first Type 055 (RENHAI) destroyer, which displaces 25 percent more tonnage than the United States' main destroyer, the Arleigh Burke-class.* The China Maritime Studies Institute at the U.S. Naval War College called the event "a watershed moment in the evolution of Chinese naval capabilities."[58] The Type 055 is 25 percent larger than the PLA Navy's next-most-capable destroyer and equipped with more offensive firepower than any of China's other ships. This superiority in firepower is largely due to the ship's 112-cell vertical launch system, allowing it to carry 48 more missiles than the already capable 64-cell launch system on the Type 052D (LUYANG III) destroyer.† The fielding of the Type 055, together with the advanced Type 052D and the older yet still modern Type 052C (LUYANG II) destroyers, has created a formidable fleet of surface combatants capable of projecting power globally.‡

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*Modern definitions for destroyers and cruisers, a class of naval combatant typically larger and more capable than destroyers and smaller only than aircraft carriers and battleships, vary by country. Official PLA sources classify the ship as a destroyer, while DOD judges it is better characterized as a guided-missile cruiser. The London-based International Institute for Strategic Studies classifies cruisers as warships displacing over 9,750 tons and destroyers as warships displacing 4,500–9,750 tons. International Institute for Strategic Studies, *The Military Balance*, February 2020, 524; Li Tang and Wang Qinghou, "Navy's Type 055 Destroyer Nanchang Is Commissioned" (海军055型驱逐舰南昌舰入列), *PLA Daily*, January 13, 2020. Translation. *http://www.81.cn/jfjbmap/content/2020-01/13/content_252021.htm*; U.S. Department of Defense, *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2019*, May 2, 2019, 36; China's Ministry of National Defense, *Transcript of the Regular Press Conference of the Ministry of National Defense in April 2019* (2019年4月国防部例行记者会文字实录), April 25, 2019. Translation. *http://www.mod.gov.cn/jzhzt/2019-04/25/content_4840410.htm*.

†The Type 055 also has advanced anti-submarine warfare capabilities, an area where the PLA Navy has historically lagged behind. Chad Peltier, written testimony for the U.S.-China Economic and Security Review Commission, *Hearing on China's Military Power Projection and U.S. National Interests*, February 20, 2020, 3.

‡As of January 2020, the PLA Navy reportedly had at least five more Type 055 ships and 13 additional Type 052Ds in sea trials or being outfitted. Since the first Type 052D was commissioned in 2014, at least ten more of these destroyers entered service. Franz-Stefan Gady, "China Declares Latest Type 052D Destroyer and Type 054A Frigate 'Combat Ready,'" *Diplomat*, March 10, 2020; Andrew Tate, "First 'Stretched' Type 052D Destroyer Enters Service," *Janes Defense Weekly*, January 14, 2020; U.S. Department of Defense, *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2019*, May 2, 2019, 36; Kristin Huang, "China Steps Up Warship Building Program as Navy Looks to Extend Its Global Reach," *South China Morning Post*, December 31, 2019; Michael McDevitt, "The Modern PLA Navy Destroyer Force: Impressive Progress in Achieving a 'Far Seas' Capability," in Peter A. Dutton and Ryan D. Martinson, *China's Evolving Surface Fleet*, China Maritime Studies Institute, July 2017, 59–61.

China's ability to sustain these ships for extended deployments in distant seas depends on its underway replenishment capability. Recent increases in both the quality and quantity of PLA Navy replenishment ships are addressing the PLA's traditional deficiency in sustaining surface combatants far from China's shores. Introduced in 2017, the Type 901 (FUYU) supply ship increases the PLA Navy's logistics support capabilities with its larger cargo capacity, more numerous refueling stations, faster speed, and unique design for replenishing China's aircraft carriers.* The Type 903A (FUCHI), introduced in 2013, provides the PLA Navy with additional cargo capacity and a hanger capable of supporting two medium-lift helicopters.[59] It is this ship that has been used in most of the PLA's Gulf of Aden antipiracy task force operations.[60] Even with these new ship classes, the PLA Navy's small overall number of replenishment ships with limited cargo capacity for ordnance constrains its power projection capabilities. The PLA has experimented with using civilian container ships to carry out underway replenishment, but this capability remains nascent.[61] (For more, see "Modernizing China's Joint Logistics System for Strategic Delivery of Troops and Materiel" later in this section.) According to Janes, in the next decade the PLA Navy's force structure will reflect a focus on more limited types of force projection, such as protecting China's overseas investments.[62]

Growing Air and Missile Capabilities Support Power Projection and Delivery

The PLA Air Force and Navy's introduction of new fighter, bomber, and transport aircraft has further improved China's ability to project power beyond its borders.† The PLA's most capable aircraft for projecting power is the H-6K bomber, which has a longer range than the PLA's other combat aircraft and carries air-launched land-attack and antiship cruise missiles that can target Guam and ships in the waters nearby.[63] China will soon boost its air power projection capability with the introduction of a nuclear-capable stealth bomber, designated the H-20, that could enter service as early as 2025.[64] Completing China's nuclear triad,‡ the strategic bomber will reportedly double the strike range of the H-6K with an estimated cruising distance of 8,500 kilometers (km) (5,300 miles [mi]), enough to cover most of the Indo-Pacific and place the continental United States within range of its conventional and nuclear weapons.[65] China is also fielding advanced fighter jets that are armed with the latest missiles and capable of striking targets beyond the first island chain, including the fourth-generation Su-35

*Janes and several U.S. experts on the PLA Navy expect at least one Type 901 and several other surface combatants and amphibious ships to operate within each aircraft carrier battle group. Chad Peltier, written testimony for the U.S.-China Economic and Security Review Commission, *Hearing on China's Military Power Projection and U.S. National Interests*, February 20, 2020, 1–2; Andrew Erickson and Christopher Carlson, "Sustained Support: The PLAN Evolves Its Expeditionary Logistics Strategy," *Janes Navy International*, March 9, 2016, 4–5.

†The PLA's aviation force has more than 2,700 aircraft, not including trainer aircraft or unmanned aerial vehicles, and around 2,000 combat aircraft (fighters, bombers, and multimission aircraft). U.S. Department of Defense, *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2019*, May 2, 2019, 40.

‡A nuclear triad is composed of land-, sea-, and air-based capabilities that can deliver a nuclear bomb or a ballistic missile or cruise missile carrying a nuclear warhead.

imported from Russia, the recently introduced J-16 and J-10C, and the indigenously produced fifth-generation J-20.*

The PLA Air Force's expeditionary capabilities are limited by its small quantities of modern heavy-lift aircraft and operational tankers, but it is working to address these deficiencies with the introduction of the Y-20 strategic heavy-lift aircraft and its tanker variant. First introduced in 2016, the Y-20 has a greater payload capacity than China's other transport aircraft, with the ability to transport troops, supplies, and equipment to most locations in the Indo-Pacific without refueling. Similar to the U.S. C-17 heavy-lift transport aircraft but with a slightly smaller size and payload capacity, the Y-20 is capable of carrying 140 troops and flying 2,700 miles with a maximum payload of 66 metric tons.[66] The PLA had only ten Y-20s in service as of mid-2020, suggesting that in the short term it will continue to rely on commercial aircraft for transport missions.[67] Experts expect the PLA will produce the Y-20 rapidly over the next decade, and Chinese media have speculated it may add between 100 and 400 of these aircraft to the order of battle by 2030.[68] DOD assesses that the Y-20 and the 2022 introduction of the world's largest seaplane, the AG600, will supplement and eventually replace China's small fleet of strategic airlift assets.[69] While currently limited in tanker capacity and combat aircraft engineered for aerial refueling, the PLA is making significant progress in this area with the development of a Y-20 tanker variant.† When the repurposed Y-20 debuts in the coming years, it will reportedly have three times the fuel capacity of China's other indigenous tanker, the H-6U, extending the range of its bomber and fighter fleet well beyond the first island chain.‡[70]

Precision Strike Capabilities Are Key Enabler of China's Ability to Project Power

The PLA Rocket Force has more than 1,300 ballistic and cruise missiles that can strike targets in and beyond the first island chain, extending PLA power projection and complicating U.S. military operations in China's periphery and the Western Pacific.[71] According to RAND Corporation senior political scientist Michael Chase, China's conventional missiles would be a key component of PLA joint campaigns, such as a blockade and amphibious landing.[72] Core to

*Another fifth-generation fighter is in development, the FC-31 (or J-31), but commentators debate whether the aircraft will be delivered to PLA customers for carrier operations or be mostly for export. Greg Waldron, "AVIC Official Sounds Upbeat Note about FC-31: Report," *Flight Global*, July 8, 2019; *Global Times*, "J-31 May Become China's Next-Generation Carrier-Borne Fighter Jet," March 6, 2013.

†The PLA Air Force and PLA Navy Aviation currently only have 14 tankers for in-flight refueling to extend aircraft ranges (ten H-6U and four Il-78 tankers). Meanwhile, the U.S. Air Force has a fleet of 455 tankers and plans to increase to 479 by the late 2020s. Only the H-6N bomber and J-20, J-15, and J-10 fighters reportedly are currently capable of conducting aerial refueling. Kevin McCauley, written testimony for the U.S.-China Economic and Security Review Commission, *Hearing on China's Military Power Projection and U.S. National Interests*, February 20, 2020, 23; Stewart Welsh and David Leroy, "The Case for a Three-Tanker Air Force," *War on the Rocks*, October 11, 2019; *Global Times*, "J-20 Now Capable of Aerial Refueling," November 15, 2018; Jeffrey Lin and P.W. Singer, "Tanker Buddies: Chinese Navy's J-15 Fighter Planes Refuel in Flight, *Popular Science*, May 7, 2014.

‡As the PLA Air Force acquires more of these aircraft, they are likely to become the core tankers fueling China's expeditionary operations over the long term as the force phases out its limited numbers of H-6U and Ukrainian Il-78s. Dave Makichuk, "China's Y-20 Variants Make Rapid Progress: Officer," *Asia Times*, February 26, 2020; Chad Peltier, written testimony for the U.S.-China Economic and Security Review Commission, *Hearing on China's Military Power Projection and U.S. National Interests*, February 20, 2020, 4.

this capability are the DF-21D and DF-26 missile systems. The DF-21D is a medium-range antiship ballistic missile with a maximum range of between 1,450 km and 1,550 km (900 mi to 963 mi), far enough to target ships in the Philippine and South China seas.[73] With a maximum range of 4,000 km (nearly 2,500 mi), the DF-26 intermediate-range ballistic missile, which can carry a nuclear warhead, is capable of precision strikes against ships and ground targets out to Guam.[74] These missile forces would play a leading role in any regional conflict, including a contingency involving Taiwan.

The PLA Rocket Force is also making progress toward fielding hypersonic weapons that can outmaneuver U.S. and allied missile defense systems,* thereby extending PLA power projection. The PLA revealed its first hypersonic weapon, the DF-17 medium-range ballistic missile equipped with a hypersonic glide missile, at an October 2019 military parade commemorating the 70th anniversary of the founding of the People's Republic of China. With a maximum range of around 2,500 km (over 1,500 mi), the missile would play an important role in a regional contingency and may already have entered service with PLA operational units in 2020.[75] According to DOD, China may also double the number of nuclear warheads in its arsenal over the next decade.[76]

Pursuing Improved Joint Logistics Capabilities and Overseas Bases

The PLA's advances in both joint logistics capabilities and access to overseas basing improve its ability to project power far from China's borders. The mostly state-owned Chinese firms that have either invested in or built overseas commercial ports and airfields have contributed significantly to this progress. Nonetheless, the PLA still faces challenges in delivering equipment to deployed forces, collaborating effectively with civilian firms, and allaying third-country concerns about allowing China to construct bases on their territories.

Modernizing China's Joint Logistics System for Strategic Delivery of Troops and Materiel

The establishment of the PLA's Joint Logistic Support Force (JLSF) in 2016 streamlined the logistics structures of different military services by placing common logistics functions in the hands of the newly created force.† [77] The JLSF is responsible for coordinating

*Hypersonic weapons are defined as (1) hypersonic glide vehicles, which are launched from a large rocket on a relatively flat trajectory that either never leaves the atmosphere or reenters it quickly before releasing the vehicle that glides unpowered to its target; and (2) hypersonic cruise missiles, which are powered by a supersonic combustion ramjet or "scramjet" engine that activates after the missile's release from a ground, sea, or air launcher. Hypersonic weapons can sustain flight in the Mach 5 to Mach 10 speed range (about 3,840 to 7,680 miles per hour) and theoretically can strike any target on earth in under one hour. Kelley M. Sayler, "Hypersonic Weapons: Background and Issues for Congress," *Congressional Research Service*, March 17, 2020; Robert Farley, "A Mach 5 Arms Race? Welcome to Hypersonic Weapons 101," *National Interest*, December 31, 2014; Harry Kazianis, "The Real Military Game-Changer: Hypersonic Weapons 101," *Interpreter*, March 14, 2014.

†In addition, as part of the Central Military Commission restructuring that resulted in the establishment of 16 organizations, the Logistic Support Department replaced the former General Logistics Department. It largely retained responsibility for logistics planning across the PLA, but implementation was passed to the JLSF, subordinated under the Central Military Commission. Under the JLSF are five logistics support centers that service each of the theaters and may be directed to support other theaters. Chad Peltier, Tate Nurkin, and Sean O'Connor, "China's Logistics Capabilities for Expeditionary Operations," *Janes* (prepared for the U.S.-China Economic and Security Review Commission), April 15, 2020, 13; LeighAnn Luce and Erin Richter, "Handling

logistics operations for overseas deployments alongside service-level logistics support.[78] Since its establishment, the JLSF has conducted at least 50 cross-theater exercises involving the different military services.[79]

Despite the JLSF's new authority, the PLA joint logistics system still struggles with long-distance precision logistics and delivery. According to independent analyst LeighAnn Luce and Defense Intelligence Agency analyst Erin Richter, the PLA appears to be placing "little emphasis on developing true strategic force projection capabilities to support PLA overseas operations" aside from its production of the Y-20 heavy-lift aircraft.[80] The PLA's difficulties in delivering equipment for small-scale UN PKOs in South Sudan highlighted substantial problems with personnel training and a shortage of spare parts for equipment, issues that must be resolved before the PLA can reliably service larger deployed forces or those in combat conditions.[81] The PLA has sought to fill some of these gaps by relying on civilian aircraft and ships to transport troops and equipment.[82]

The PLA regularly employs civilian air and maritime assets for transportation missions and other logistics support, but such cooperation is not without its challenges.[83] Commercial aircraft, including Boeing 777 models, have significantly augmented the PLA Air Force's strategic delivery capabilities by transporting troops and supplies for overseas operations, military exercises, and international competitions.[84] While commercial roll-on/roll-off ships and tankers have conducted exercises with the PLA Navy and assisted logistics operations, more recently container ships have also contributed to naval logistics.[85] In its first test of at-sea replenishment with a commercial ship, the PLA Navy conducted a November 2019 exercise with a container ship owned by the Chinese SOE Sinotrans replenishing dry cargo to two PLA naval ships.[86] China's 2017 National Defense Transportation Law strengthened construction standards for ships and aircraft to be built to military specifications and required civilian transportation support for overseas military operations.[87]

More broadly, the PLA has used both civil aviation and ship fleets since 2012 to support power projection, complementing its use of China's modern rail network and trucking fleet.[88] In 2014, the PLA established the Zhengzhou Strategic Projection Base, billed as its first "military-civil fusion strategic delivery base," which aims to bolster joint logistics support for PLA power projection missions.[89] Using civilian assets, the base has supported transregional exercises in China and airlifted troops supporting PKOs in Africa as well as aid missions in Burma (Myanmar) and Afghanistan.[90] The PLA's reliance on civilian entities is not without its own challenges, however. Mr. McCauley testified to the Commission that civilian personnel are not always sufficiently trained to support PLA missions and do not always fully comply with dual-use ship and aircraft construction regulations mandated by China's National Defense Transportation Law.*[91]

Logistics in a Reformed PLA," in Philip C. Saunders, ed., *Chairman Xi Remakes the PLA: Assessing Chinese Military Reforms*, NDU Press, March 3, 2019, 273–274.

*China has sought to strengthen military-civil fusion for PLA logistics and strategic delivery through the implementation of the 2017 National Defense Transportation Law, which requires civilian transportation entities and infrastructure to support the PLA. The law calls for: (1) do-

PLA Logistics System Gains Operational Experience Responding to COVID-19 Crisis

The PLA supported China's national response to the novel coronavirus (COVID-19) pandemic by conducting rapid mobilization and logistics over long distances, skills it would need to execute in any expeditionary operation. The PLA's response, which involved medical personnel from every service and force, constituted one of the biggest mobilizations of its medical system ever and tested the PLA's joint operations capability after the force's 2015 reorganization.[92] According to Chinese media, the JLSF secured and managed the distribution of medical supplies, provided medical treatment, and built hospitals in Wuhan, the epicenter of the outbreak and headquarters of the force.[93] The PLA also used large and medium-size transport aircraft, including six Y-20 aircraft, to deliver supplies and personnel to Wuhan and other hard-hit areas in Hubei Province. Moreover, the response was notable because it was the PLA's first-ever large-scale operation involving the Y-20.[94]

Network of Basing and Access Points Supports the PLA's Global Ambitions

The PLA is using a two-track strategy for expanding its overseas basing architecture. One track involves building purely military bases while the other involves establishing preferential access to Chinese-invested civilian ports.[95] The latter dual-use facility model has the benefit of serving both commercial and military logistics purposes while supplementing China's limited capacity to sustain complex military operations overseas.[96] Both tracks of China's basing model are consistent with the PLA's "strategic strongpoints" concept.[97] The 2013 *Science of Military Strategy* defines strategic strongpoints as locations that "provide support for overseas military operations or act as a forward base for deploying military forces overseas."[98] According to U.S. Naval War College research associate Conor Kennedy, strategic strongpoints will improve the PLA's ability to operate overseas by shortening resupply intervals, hosting facilities for servicing personnel and equipment, and serving intelligence support functions.[99] China's establishment of its first overseas military base in Djibouti in 2017 contradicted China's 1998 white paper's claim that China "does not station troops or set up military bases in any foreign country."[100] This is the first of what Mr. Kennedy believes may become a series of overseas strategic strongpoints.[101]

The PLA's purely military bases include those it has established on artificial islands in the South China Sea as well as its first overseas naval base in Djibouti (for more on the Djibouti base, see "China's Basing and Troop Deployments in East Africa" later in this

mestic and overseas civilian transportation nodes to help sustain PLA operations; (2) the creation of standards and technical requirements for the construction of commercial ships and aircraft to military specifications; and (3) civilian transportation entities to participate in training with the PLA and provide assistance in wartime. For more, see Kevin McCauley, written testimony for the U.S.-China Economic and Security Review Commission, *Hearing on China's Military Power Projection and U.S. National Interests*, February 20, 2020, 6–7; China's Ministry of National Defense, *Law of the People's Republic of China on National Defense Transportation [Effective]*, March 3, 2017.

section.)[102] PLA writings advocate for additional naval bases overseas, as well as airbases in countries from Southeast Asia to Latin America, to support the strategic delivery of forces, equipment, and materiel.*[103] One way the PLA has sought to address this need is by seeking friendly countries' permission to access their ports and airfields. The PLA has acquired some access through exercises, Gulf of Aden antipiracy operations, humanitarian assistance/disaster relief, and PKOs.[104]

China has also leveraged its economic cooperation with countries participating in BRI to gain access to airfields that enhance the PLA's strategic delivery capabilities.[105] As of 2019, China had established international air passenger agreements with 65 countries participating in BRI and freight transportation agreements with 14 countries participating in BRI, some of which could conceivably support PLA military operations in wartime.[106] Even so, it is probable that in wartime most countries would be reluctant to host a Chinese base or allow the PLA access to their ports and airstrips for fear of being dragged into a regional conflict.[107] PLA sources have also discussed constructing floating bases to avoid these limitations.[108]

The second track of the PLA's basing strategy involves preferential access to Chinese-invested commercial ports. Properly equipped, these ports may perform valuable military functions that do not require the establishment of formal PLA facilities and permissions.[109] In his February 2020 testimony to the Commission, U.S. Naval War College professor Isaac Kardon argued that in the next five to ten years China is likely to employ such a dual-use model built around ports serving both commercial and military logistics functions.[110] According to Dr. Kardon, China may consider several factors when pursuing a base or dual-use facility, including geographic proximity to perceived security threats, whether the host is friendly and stable, suitable natural conditions at the port, adequate force protection, and the presence of Chinese enterprises on or near the site. Even if many of these conditions are unmet, Dr. Kardon observed, China could be motivated by opportunism to establish bases in willing host countries in a bid to expand its global network of strategic strongpoints.[111]

China's investment in overseas commercial ports has grown dramatically over the past decade, a trend that increases the feasibility of the PLA's reliance on the second type of basing model. As of February 2020, Chinese firms partially own or operate 94 ports globally, 59 of which involve a Chinese SOE.[112] Dr. Kardon found that just two SOEs—Hong Kong-based China Merchants Port Holdings (CMPort), a subsidiary of central SOE China Merchants Group, and China COSCO Shipping Company (COSCO)—accounted for nearly all of the 59 cases in which Chinese SOEs partially own or operate a port.†[113] Other Chinese firms own or operate a small number of

*In addition to the Djibouti base, the PLA operates satellite telemetry, tracking, and control stations in Argentina and Namibia, as well as a base in Tajikistan near the border with Afghanistan. Mark Stokes et al., "China's Space and Counterspace Capabilities and Activities," *Project 2049* and *Pointe Bello* (prepared for the U.S.-China Economic and Security Review Commission), March 30, 2020, 91–92, 94; Gerry Shih, "In Central Asia's Forbidding Highlands, a Quiet Newcomer: Chinese Troops," *Washington Post*, February 18, 2019.

†According to Dr. Kardon, COSCO is more likely than CMPort to facilitate access to the PLA Navy because of the former firm's lack of transparency, willingness to incur losses, and dependence on financial support from Beijing. CMPort, however, has shown it is willing to cooperate

ports but also appear to be designed with the PLA in mind as a customer. Chinese SOE China Overseas Port Holdings, for instance, was reportedly established for the sole purpose of constructing and operating Pakistan's Gwadar Port.[114]

China's Power Projection in the World

China's power projection capabilities are most developed in East and Southeast Asia but diminish as distance from the region increases. China's militarization of the South China Sea has altered the balance of power in Southeast Asia, and its anticipated access to basing facilities in Cambodia is likely to shift the balance even more sharply in China's favor. In the Indian Ocean, China has created a constant presence through routine deployments of ships and submarines. By contrast, its newer but growing power on the African continent is anchored by a base and troop deployments that ostensibly serve humanitarian purposes. The PLA also occasionally forays into the South Atlantic and is building influence in Latin America and Caribbean countries that could translate into a more robust military presence over time.

China Seeks Dominance along Its Maritime Periphery

For China's defense planners, the most important region in the world is the one on their doorstep, comprising the geographic area between China's shores and what Beijing terms the "first and second island chain" (see Figure 1).* PLA strategists assert that the United States relies upon these island chains to "encircle" or "contain" China and prevent the PLA Navy from freely operating in the Western Pacific.[115] The PLA seeks to project power throughout the first and second island chains in order to resolve outstanding territorial disputes and to deny or defeat intervention by U.S. forces in a contingency.

"Taking Back" the First Island Chain: Resolving China's Claims on Taiwan and the Senkakus

The PLA's combat preparations remain focused on the ability to seize Taiwan and mitigate U.S. intervention in a Taiwan conflict.[116] PLA ships and aircraft have significantly increased their training and patrols near Taiwan in recent years, intensifying Beijing's military pressure on the island in peacetime and improving its ability to carry out a wartime campaign.[117] This activity has included regular transits by China's first aircraft carrier in the Taiwan Strait as well as transits by other Chinese warships through the Bashi Channel, a key chokepoint within the first island chain important for force projection beyond China's near seas.[118] PLA Air Force aircraft have

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with the PLA Navy by regularly devoting space for PLA Navy ships at its Doreleh Port in Djibouti. Isaac Kardon, original database on PRC firm port ownership and operation, 2020; Isaac B. Kardon, written testimony for the U.S.-China Economic and Security Review Commission, *Hearing on China's Military Power Projection and U.S. National Interests*, February 20, 2020, 4–5.

*The first island chain refers to the line of islands running through the Kurile Islands, Japan, the Ryukyu Islands, Taiwan, the Philippines, Borneo (which includes parts of Indonesia, Malaysia, and Brunei), and the Indonesian island of Natuna Besar. The second island chain farther east encompasses Japan's Volcano Islands and Bonin Islands, the U.S. territories of the Northern Mariana Islands and Guam, and Palau. Andrew S. Erickson and Joel Wuthnow, "Barriers, Springboards and Benchmarks: China Conceptualizes the Pacific 'Island Chains,'" *China Quarterly*, January 2016, 5–11.

conducted flights circumnavigating Taiwan since 2016 and repeatedly crossed the median line, an informal demarcation between Taiwan and mainland China in the Taiwan Strait, since 2019.[119] Moreover, the PLA's circumnavigation flights and naval transits through the Miyako Strait suggest the PLA could attack Taiwan from the north or the east, compounding the threat of an invasion on the island's western side. Coupled with China's military modernization, these activities have improved the PLA's ability to invade smaller Taiwan-controlled islands and carry out operations such as an air and maritime blockade of Taiwan or air and missile strikes against targets across the island (for more, see Chapter 4, "Taiwan.")[120]

China's power projection activities also target the Japan-controlled Senkaku Islands in the East China Sea, which Beijing claims as its own.* Since Tokyo's purchase of the islands from a private Japanese owner in 2012, China has sought to erode Japan's effective sole administration of the islands and establish its own control through China Coast Guard, PLA Navy, and PLA Air Force patrols.[121] Increasingly frequent maritime and air incursions around the Senkaku Islands and Miyako Strait are a hallmark of China's coercive activities in the East China Sea.† These operations have also provided China with experience transiting the Miyako Strait, which in addition to providing a maritime passage north of Taiwan also enables access to the far seas.[122] Moreover, China has considerably increased the number of aircraft operating near Japanese territory, ramping up military pressure on Japan during peacetime and improving the PLA's ability to carry out a range of potential campaigns involving the seizure of the Senkakus.‡[123] This growing air presence includes the PLA's increasingly frequent H-6K long-range bomber training in airspace near Japan.[124]

Extending Control into the South China Sea

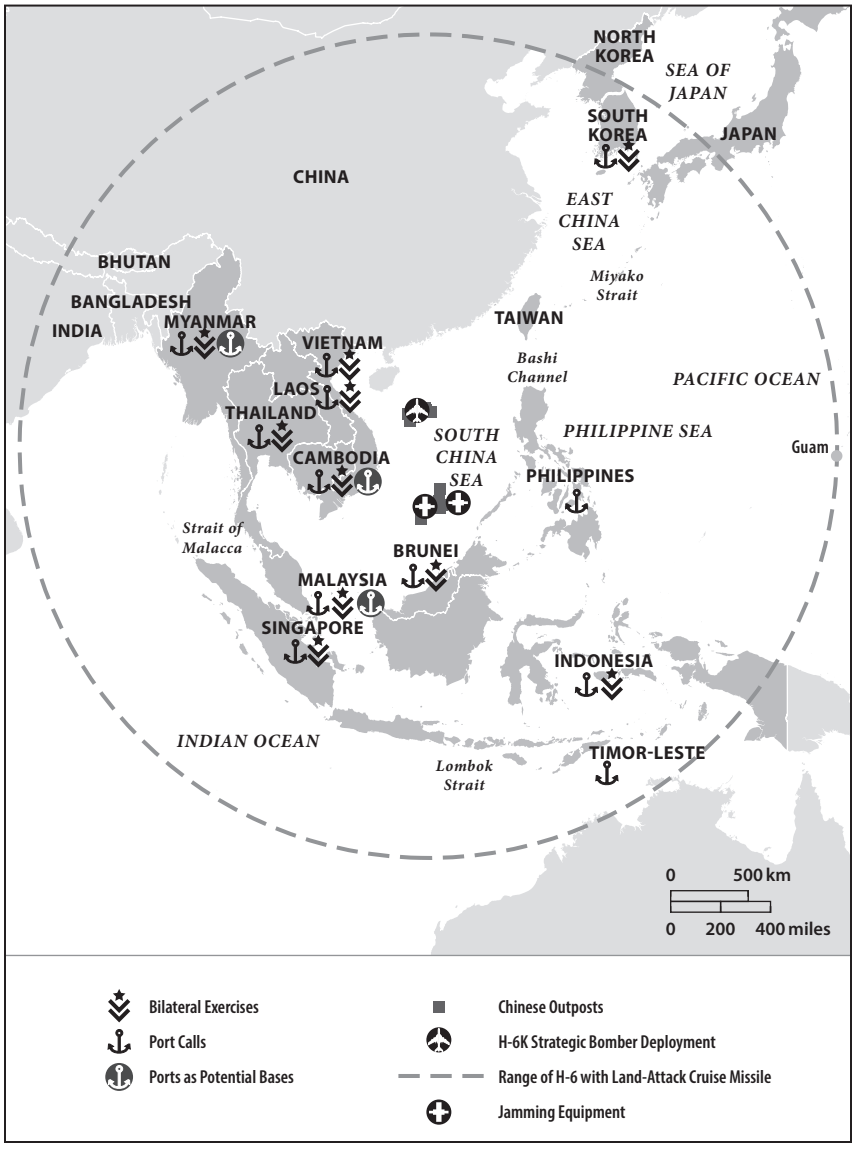
Beijing's power projection efforts also aim to extend its operational presence deep into the South China Sea. China's rapid placement of military infrastructure and advanced weapons systems on artificial islands in the South China Sea since 2013 has expanded its power projection range to the south by 1,000 nautical miles and dramatically shifted the balance of power in maritime Southeast Asia (see Figure 2).[125] According to Gregory Poling, director of the Asia Maritime Transparency Initiative at the Center for Strategic and International Studies, these developments enable continuous deployments of military power in the region and the persistent coercion of neighboring states.[126] To date, China has built one major air and naval base in the Paracels and three in the Spratlys that

*Taiwan also claims the islands and calls them the Diaoyutai.

†In December 2019, the Japan Coast Guard reported over 1,000 incidents of Chinese incursions into Japanese territory over the course of the year, a record number and nearly 80 percent more than in 2018. See *Japan Times*, "Chinese Incursions near Japan-Held Islands Top 1,000 to Hit Record, Up 80% on Last Year," December 6, 2019.

‡Between April 2019 through March 2020, the Japan Air Self-Defense Force scrambled its fighter aircraft 675 times to intercept Chinese military aircraft approaching Japanese airspace, the second-highest number of such incidents over the last five years. Japan scrambled its fighter aircraft a record number of 851 times in response to Chinese military aircraft between April 2015 and March 2016. Japan's Ministry of Defense Joint Staff, *Scramble Missions in Fiscal Year 2019* (令和元年度の緊急発進実施状況について), April 9, 2020. Translation. *https://www.mod.go.jp/js/Press/press2020/press_pdf/p20200409_01.pdf*.

Figure 2: PLA Power Projection in East Asia and the South China Sea



Note: Port calls, bilateral exercises, and high-level contacts between militaries included in the map are from 2010–2020. Only the countries and territories in the darker shade are analyzed for the purposes of this map.

Source: Created for the U.S.-China Economic and Security Review Commission; Various.[127]

host troops, high-frequency radar stations, and military-grade runways.[128] China has conducted landing and takeoff drills with strategic bombers, rotated fighter jets, and installed surface-to-air missile systems as well as antiship cruise missiles on Woody Island in the Paracels since 2016.[129] It also reportedly deployed antiship cruise missiles and surface-to-air missile systems to three outposts in the Spratlys in 2018.[130] In testimony to the Commission, Mr. Poling said China's bases in the South China Sea "further China's goal of eventually dominating the waters within the first island chain and provide a stepping stone to project power beyond it."[131]

Beijing has used its continuous presence in the South China Sea to deny other countries in the region access to features they already occupy and to prevent them from fishing or drilling for natural resources. Nearly every class of PLA Navy and China Coast Guard ship has regularly called at ports in the Spratlys since 2017, while the People's Armed Forces Maritime Militia tripled its presence from fewer than 100 ships anchored at Subi and Mischief reefs at any given time in 2017 to 300 in August 2018.[132] China's ports in the Spratlys allow its naval forces to operate in greater numbers and for far longer in the South China Sea than they would otherwise because they do not need to sail back to mainland China for resupply. This presence has led to numerous high-profile incidents of harassment against military, fishing, and resource exploration vessels from the Philippines, Vietnam, Indonesia, and Malaysia in recent years.[133] Two recent examples include the apparently concerted move by hundreds of Chinese vessels to block the Philippines from constructing military infrastructure on Thitu Island in the early months of 2019 and a China Coast Guard ship's ramming and sinking of a Vietnamese fishing boat in April 2020.[134]

Expanding Power Projection Capabilities in Southeast Asia

China is also seeking to expand its power projection capabilities in the region by linking bases on its artificial islands with a permanent military presence in continental Southeast Asia. Doing so would significantly expand its power projection capabilities into the far southern reaches of the South China Sea, across continental Southeast Asia, and into the Indian Ocean. The Wall Street Journal reported in July 2019 that China had signed a secret agreement with Cambodia giving the PLA exclusive rights to part of Cambodia's Ream naval installation on the Gulf of Thailand for 30 years, with automatic renewals every ten years thereafter.[135] The Ream naval base is not far from Dara Sakor, where a Chinese company has secured a 99-year lease to build an airport on land constituting 20 percent of Cambodia's coastline that not only is close to a port but also has an airstrip long enough to support military aircraft.[136] If China is able to deploy fighter jets from Dara Sakor in the future, it would enable the PLA to contest U.S. air superiority over the Malacca Strait and into the eastern Indian Ocean.[137]

To create bilateral relations conducive to the establishment of a future base, the PLA engages in robust influence-building efforts in Southeast Asia. Senior PLA officers met most frequently

with their Thai counterparts between 2002 and 2020 while also holding numerous meetings with Vietnam and Singapore.[138] The PLA Navy conducts routine port calls in the region, calling most often at ports in Singapore and Thailand.[139] China participates in regular military exercises with countries in the region, such as Thailand and Cambodia, and conducted its first naval exercise with ASEAN in 2018.[140] According to a Janes report contracted by the Commission, sites in Malaysia or Burma could also serve as bases within the next decade.[141] The PLA's growing operational presence and increased efforts to build influence along the second island chain also could result in the establishment of bases in the Pacific Islands.*

South Asia and the Indian Ocean Rim: Beyond the Second Island Chain

While the PLA's focus remains concentrated on East and Southeast Asia, it has also expanded its influence over and presence within countries along the Indian Ocean rim (see Figure 3).† Some analysts in Australian and Indian defense circles have argued that the traditional two island chain concept be expanded beyond the second island chain to account for the growing scope of China's activity in the Indian Ocean, which includes naval operations as well as a network of dual-use facilities that support PLA basing objectives.[142] The strategic drivers of the PLA's activities in the Indian Ocean rim are threefold: to exert pressure on India, with whom China has extensive territorial disputes; to slow U.S. forces intervening in an Asian contingency; and to protect the SLOCs carrying Chinese trade and energy imports.

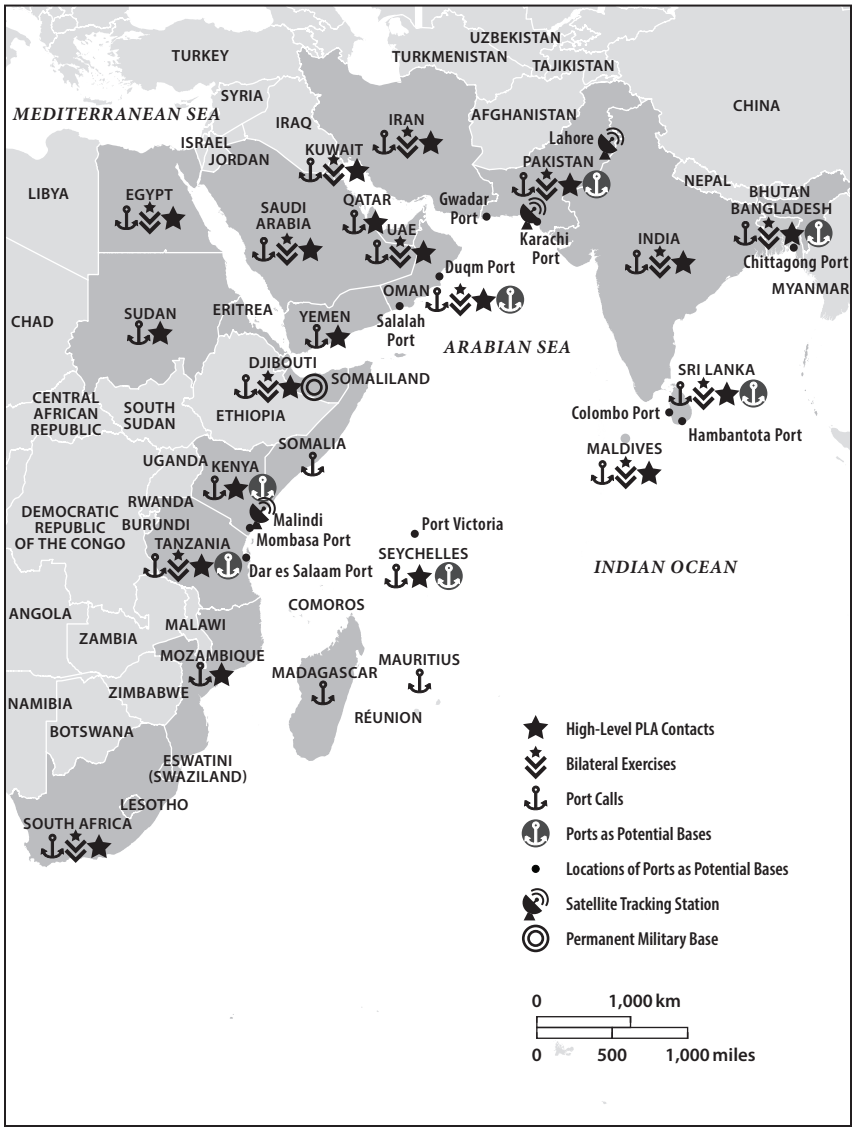
China's Military Expansion in South Asia

China conducts a variety of naval operations in the Indian Ocean that serve to project power. The most prominent example is the ongoing Gulf of Aden antipiracy task forces, which China publicly portrays as its contribution to the security of the global commons. The PLA Navy dispatched 35 naval escort task forces to support international antipiracy efforts in the Gulf of Aden between 2008 and April 2020, undertaking merchant shipping escort operations; maritime intercept operations; visit, board, search, and seizure operations; and deployments by China's special forces.[143] The PLA Navy has also regularly deployed diesel-electric and nuclear attack submarines in the Indian Ocean since 2013, which—despite their ostensible mission to support China's Gulf of Aden antipiracy task forces—serve to collect intelligence and signal to India that China could contest the Indian Navy or threaten commercial shipping.[144] Chinese hydrographic survey vessels also sometimes venture into waters around

*For more information on the PLA's activities in the Pacific Islands, see U.S.-China Economic and Security Review Commission, *2019 Annual Report to Congress*, November 2019, 418–423; Ethan Meick, Michelle Ker, and Han May Chan, "China's Engagement in the Pacific Islands: Implications for the United States," *U.S.-China Economic and Security Review Commission*, June 14, 2018, 6, 17.

†The Indian Ocean rim begins with South Asian countries like India, Pakistan, Bangladesh, and Sri Lanka before stretching across the Indian Ocean to include the island nations of the Maldives, the Seychelles, the Union of Comoros, and Madagascar. Its upper western side is framed by the Middle Eastern countries of Iran, the United Arab Emirates, Oman, Yemen, and Egypt, while its lower western side comprises the East African countries of Sudan, Djibouti, Kenya, Tanzania, Mozambique, and South Africa.

Figure 3: PLA Power Projection along the Indian Ocean Rim



Note: Port calls, bilateral exercises, and high-level contacts between militaries included in the map are from 2010–2020. Only the countries and territories in the darker shade are analyzed for the purposes of this map.

Source: Created for the U.S.-China Economic and Security Review Commission; Various.[145]

India's strategic sites to collect intelligence.* For example, India's navy chased away China's *Shiyan-1* research vessel in December 2019 after catching the vessel loitering without permission near Port Blair, the capital of the Indian-administered Andaman and Nicobar Islands where the Indian Armed Force's tri-service theater command is based.[146]

The PLA has also made itself highly visible in South Asia in recent years through activities and projects that build influence over local civilian and military leaders. Although between 2002 and 2020 senior PLA officials met most frequently with their Pakistani counterparts—a sign of that bilateral relationship's key importance—they also regularly interacted with defense officials from India, Bangladesh, and Sri Lanka.[147] The PLA Navy calls frequently at South Asian ports for goodwill visits as well as rest and replenishment, especially in Pakistan, Sri Lanka, and Bangladesh.[148] China participates in military exercises with South Asian countries, including the multilateral Cormorant ground exercise with Sri Lanka and the bilateral Shaheen air force exercise with Pakistan.[149] The PLA has also brought officers from South Asian countries to China for professional military education and assisted with military construction projects, for example building an office and auditorium complex for the Sri Lankan Military Academy in December 2017.[150] China reportedly also agreed in 2019 to build a submarine base in Bangladesh to berth two Type 035G diesel-electric submarines it sold to the country in 2016.[151] All of these activities build goodwill among local leaders and are conducive to China's plans to increase its military presence in the future.

China may soon seek to translate this influence into military bases in South Asia. According to an analysis by Janes, potential candidates for a future PLA base include Chittagong Port, Bangladesh; Hambantota Port and Columbo Port, Sri Lanka; and Karachi Port and Gwadar Port, Pakistan.[152] To take one example, Janes assesses that China could establish a base at Chittagong Port because Bangladesh's participation in BRI, debt to China, and Beijing-friendly government all predispose it to accept a basing request. A base at Chittagong Port could use commercial facilities to augment PLA operations and create a point for access and replenishment in the Indian Ocean.[153] Chittagong Port can already support submarines, small surface combatants, maintenance facilities, and floating dock repairs.[154] Moreover, Chittagong Port would offer a convenient location because it is close to the home base of most of the Bangladesh Navy fleet, with whom the PLA Navy sometimes exercises.

China's Basing and Troop Deployments in East Africa

China's approach to East Africa and other countries on the continent is motivated by its strategic requirements to delay U.S. forces in a contingency and protect China's access to the SLOCs as well as natural resources. China's first overseas military base in Djibouti is the most prominent example of PLA power projection in East Africa, a region notable for its visible PLA engagement and operational

*In December 2019, the survey ship *Xiangyanghong 06* also reportedly launched 12 unmanned underwater drones into the Indian Ocean, which China recovered in February 2020 after making more than 3,400 observations. For more, see H. I. Sutton, "China Deployed 12 Underwater Drones in the Indian Ocean," *Forbes*, March 22, 2020.

presence (for more, see Chapter 1, Section 3, "China's Strategic Aims in Africa"). The base replenishes vessels from the Gulf of Aden antipiracy task forces and features a heliport, hangars, hardened bunkers for possible ammunition storage, and barracks, with at least one pier under construction that supports all naval ships.[155] While China presents the base as a facility supporting regional antipiracy and peacekeeping operations, the base clearly serves larger strategic purposes. Because of Djibouti's strategic location near the maritime passage connecting the Red Sea and Indian Ocean, it is a transshipment hub for cargo in and out of the Middle East as well as for the transport of the Middle Eastern crude oil on which China increasingly depends.[156] Janes has noted in its analysis that a Chinese submarine's port call to the base in April 2018 suggests it "could be used to extend the endurance of diesel-electric attack boats operating in the Indian Ocean."[157] China's base in Djibouti—coupled with PLA Navy ships and submarines operating in the Indian Ocean—could complicate the U.S. Fifth Fleet's operations in the region and ability to respond quickly to a contingency in East Asia.

China's participation in UN PKOs in Africa also facilitates its regional power projection.* While PKOs are often portrayed as an example of international prestige-seeking, they in fact provide the PLA with opportunities to gain experience useful for military operations. Since the PLA's first deployment of an infantry unit as part of a PKO on a mission to South Sudan in 2012, subsequent missions have all included these units with a mix of other forces, such as logistics, transportation, medical, and engineering units.[158]

Participating in peacekeeping missions has enabled the PLA to improve its command and control among small infantry units, familiarize its troops with unfamiliar operating environments, and increase its interoperability with other countries' militaries.[159] Moreover, PKOs have given the PLA experience with overseas deployments of increasingly advanced capabilities. In 2017, the PLA's 81st Group Army dispatched a helicopter unit to Khartoum, Sudan, to join the UN-led PKO in Darfur. This was the first time the PLA had sent such a unit to support a UN mission, thereafter making its deployment of army aviation units routine.[160] The PLA Air Force also deployed the Y-20 transport aircraft to bring PLA peacekeepers back home from the Democratic Republic of the Congo in September 2019, marking the first time China used its heavy-lift aircraft to transport troops and equipment over such a distance.[161]

The PLA also exerts influence in East African countries through traditional military-to-military diplomacy (for more, see Chapter 1, Section 3, "China's Strategic Aims in Africa"). Senior PLA officers met most frequently with their counterparts in Tanzania between 2002 and 2020, but they also interacted often with defense officials from Zambia, Mozambique, Zimbabwe, Kenya, and Sudan.[162] The PLA Navy has called 108 times in Djibouti for replenishment and overhaul since 2010, and has visited ports in Mozambique, Kenya,

*As of August 2020, China had 1,030 troops deployed to the UN Mission in South Sudan (UNMISS) peacekeeping mission; 364 troops deployed to the UN-AU Mission in Darfur (UNAMID) peacekeeping mission in Sudan; 413 troops deployed to the UN Multidimensional Integrated Stabilization Mission in Mali (MINUSMA) peacekeeping mission; and 218 troops deployed to the UN Organization Stabilization Mission in the Democratic Republic of the Congo (MONUSCO) peacekeeping mission. For more, see United Nations Peacekeeping, "Troop and Police Contributors," August 2020. *https://peacekeeping.un.org/en/troop-and-police-contributors.*

and Tanzania several times since 2014.[163] The PLA and the Tanzanian military have conducted combined exercises, such as the Sincere Partners exercise held in December 2019, and the PLA built a military training center for the Tanzania People's Defense Forces in 2018.[164]

China's ties with East African countries are less extensive than in regions like South Asia, but some analysts believe this influence at minimum creates the possibility of future Chinese bases in the region to complement the existing base in Djibouti.[165] For example, Janes argues that the port in Mombasa, Kenya, is a likely candidate for a future dual-use-style facility.[166] Kenya's likelihood of hosting a PLA base is also relatively high due to its receipt of $9.2 billion in BRI-related projects, openness to foreign basing, and risk of defaulting on big-ticket projects like the $2.3 billion Mombasa-Nairobi Standard Gauge Railway.[167] The PLA Navy could take advantage of existing military-grade piers at Mombasa for rest and replenishment.[168]

The Atlantic Ocean and Western Hemisphere: Into the Far Seas

The PLA's power projection activities in the South Atlantic, Latin America, and the Caribbean further several strategic requirements by protecting China's access to SLOCs, which transport crude oil from Angola and Venezuela, and distracting the United States in a potential contingency (see Figure 4).* China's presence in these regions is clearly less developed than in East Africa or the Indo-Pacific; it does not, for example, dispatch its naval forces to protect the SLOCs or maintain permanent military bases that enhance power projection capabilities in these areas. Nonetheless, the PLA has already established a pattern of Atlantic Ocean deployments, expressed interest in establishing a permanent presence in a South Atlantic country, and built a space station in Argentina run by its Strategic Support Force, all developments that enhance its power projection.

Beijing's Emerging Interest in the South Atlantic

The PLA Navy's operations in the South Atlantic and reported search for a basing site on the African continent's western coast serve to protect the SLOCs carrying Angolan oil around the tip of South Africa and could divide U.S. attention during a contingency. The PLA's naval operations along the South Atlantic coast in particular are anchored by its close relationships with South Africa, Angola, and Namibia, all of which have hosted PLA Navy port calls.[169] Ryan Martinson of the U.S. Naval War College notes that the PLA Navy has operated in the South Atlantic every year since 2014, progressing from "port visits and largely symbolic joint exercises to independent operations at sea."[170] Unlike China's deployments of warships in the Indian Ocean, PLA Navy vessels deployed to the South Atlantic tend to have been "added on to overseas deployments designed for some other aim," such as Gulf of Aden antipiracy task

*The regions considered here encompass countries along Africa's southwestern coast like Guinea-Bissau, Guinea, Liberia, the Ivory Coast, Ghana, Togo, Benin, Nigeria, Cameroon, Gabon, the Congo, the Democratic Republic of the Congo, Angola, Namibia, and South Africa, as well as those across the Atlantic, including Latin America and the islands of the Caribbean.

forces, and are irregular deployments of two surface combatants and a supply ship.[171] Nonetheless, the PLA Navy's deployments in the South Atlantic are part of its push to extend naval operations to the far seas and help the PLA familiarize itself with the ocean battlespace environment.[172] These activities may also reflect what Mr. Martinson describes as a wartime strategy to distract U.S. forces in the event of a maritime contingency in East Asia.[173]

The PLA also builds influence in African countries along the Atlantic Coast through visible activities that seek to build awareness and goodwill among local leaders. Senior PLA officials met most frequently with South African counterparts between 2002 and 2020, while interacting to a lesser degree with West African counterparts in Namibia, Angola, Gabon, and Ghana.[174] Since 2014, the PLA Navy has called six times at the port in Cape Town, South Africa, visited ports in Angola and Gabon twice, and stopped at ports in Nigeria, Cameroon, Namibia, Ghana, and the Ivory Coast at least once.[175] The PLA has also conducted military exercises with countries along Africa's Atlantic seaboard from South Africa to Ghana, including a joint trilateral sea exercise between the South African, Russian, and Chinese navies in November 2019.[176]

Such influence-building could result in a future PLA base in Namibia. According to Janes, Namibia's Walvis Bay would be a strong candidate for a future PLA logistics facility because it provides strategically valuable access to the South Atlantic in proximity to other nodes of the Maritime Silk Road.[177] Moreover, Walvis Bay's existing infrastructure could support nearly all types of PLA Navy surface combatants.*[178] Reports in the Namibian press in 2014 indicated China was in discussions with Namibia to establish a military facility at Walvis Bay, where there is already a massive BRI project to expand the bay and port.[179] Aside from its China-friendly government, however, Namibia does not exhibit the risk factors typically associated with a future PLA base, such as significant debt to China, hosting of PLA Navy replenishment calls, or prior openness to foreign basing.

Into the Western Hemisphere: Latin America and the Caribbean

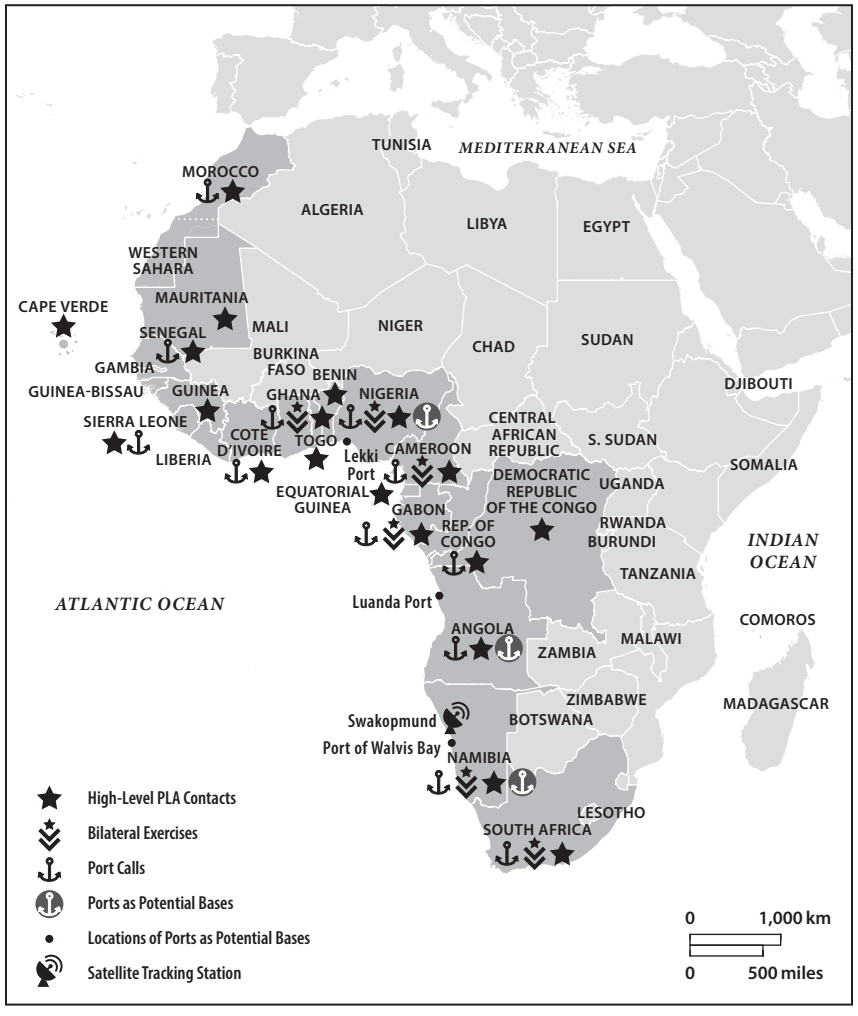
The PLA's overt power projection in Latin America and the Caribbean is limited at present but its growing influence serves to facilitate espionage and support China's space activities. In time, China's presence may also create the conditions for China's protection of the SLOCs that carry Venezuelan crude oil to China or for the establishment of a base from which Chinese forces could distract the United States during a future East Asian contingency.

The most prominent example of Chinese military presence in Latin America and the Caribbean is the satellite tracking and control station in Argentina's Patagonia region, which U.S. analysts worry improves China's ability to spy on the United States in the Western Hemisphere. The station is ostensibly devoted to peaceful space observation and exploration but managed by the China Satellite Launch and Tracking Control General, which in turn reports to the

*Walvis Bay previously served as the regional headquarters for Britain's Royal Navy due to its strategic location and decent facilities. See Robert C. O'Brien, "China's Next Move: A Naval Base in the South Atlantic?" *Pacific Council on International Policy*, March 31, 2015.

Figure 4: PLA Power Projection in the Atlantic Ocean and Western Hemisphere

Figure 4: PLA Power Projection in the Atlantic Ocean and Western Hemisphere—*Continued*



Note: Port calls, bilateral exercises, and high-level contacts between militaries included in the map are from 2010–2020. Only the countries and territories in the darker shade are analyzed for the purposes of this map.

Source: Created for the U.S.-China Economic and Security Review Commission; Various.[180]

PLA Strategic Support Force.[181] According to a January 2019 investigation by Reuters, the Argentine government negotiated the station with China in secret, has limited oversight of the facility, and lacks an enforcement mechanism to ensure the station's activities are limited to civilian purposes.[182] Some U.S.-based analysts have warned that the station's enormous dish radar could enable China to collect information on the position and activity of U.S. military satellites, effectively allowing it to spy throughout the Southern and Western hemispheres.[183] The PLA also reportedly operates multiple signals intelligence facilities in Cuba, though the details surrounding these are murky.[184]

The PLA is building deep ties with local officials and institutions in Latin America and the Caribbean that may ultimately facilitate greater military access or basing agreements for the PLA. Senior PLA officials met frequently with regional counterparts between 2002 and 2020, favoring those in Chile, Cuba, Brazil, and Argentina.[185] Since 2013, the PLA Navy has called several times at ports in the Caribbean, Ecuador, and Chile.[186] The PLA has participated in a small number of military exercises with partners in the region, such as a 2013 combat exercise with the armed forces of Chile, Brazil, and Argentina.[187] The PLA sent its hospital ship *Peace Ark* to the Caribbean to offer humanitarian services to locals in 2011, 2015, and 2018, increasing the length and complexity of its operations each time while familiarizing PLA personnel with the local security environment.[188] According to U.S. Army War College professor R. Evan Ellis, China's gifting of nonlethal items to the defense forces of Caribbean nations like Barbados and Guyana has successfully built "connections and goodwill potentially useful in protecting the interests of Chinese companies and personnel operating in the recipient nations."[189]

The PLA has also deepened its ties to the region through professional military education and a dialogue involving senior defense officials from the Caribbean. Latin American and Caribbean military officials have traveled to China for instruction at the PLA National Defense University in Beijing as well as navy and army staff and command courses in Nanjing, while PLA members have taken special courses at Brazil's jungle warfare school and Colombia's special forces school.[190] Perhaps the most telling sign of the PLA's intention to deepen its military presence in the region emerged during a conference of senior defense officials from Caribbean and South Pacific countries held in Beijing in July 2019. Chinese Defense Minister Wei Fenghe stated at the forum that the PLA stood ready to deepen cooperation with Latin America and Caribbean countries in areas such as counterterrorism and disaster relief under the framework of BRI.[191] His remarks were affirmed by Guyana Defense Force Chief of Staff Brigadier Patrick West, who said Guyana was eager to strengthen exchanges and cooperation with the PLA.[192]

The PLA's activities in the region reflect preparations that would allow it to conduct a portion of a future war from the Western Hemisphere if required. Dr. Ellis told the Commission in June 2020 that "Chinese security engagement in the region, while modest to date, plays an important role in helping the PLA develop technical and support capabilities, knowledge and relationships that enable it to

operate in an increasingly global fashion."[193] The PLA's professional military educational exchanges with Latin American and Caribbean military officers allow the force to obtain information about those personnel, evaluate their potential to be compromised for China's intelligence-gathering purposes, and develop relationships useful for future operations in Latin America.[194]

Taken together with China's deployments and other cooperative activities in the region, such relationships may enable the PLA to secure access to local ports, airfields, and other facilities without establishing formal alliances or base access agreements in the future, Dr. Ellis argues.[195] Indeed, China is busily establishing the kinds of ties and presence in Latin America and the Caribbean that may presage the development of additional military bases in the region. China's efforts to engage Latin American and Caribbean governments arguably resemble the political, economic, and military strategies it has deployed to build close relationships with African governments. (For a more extensive discussion of China's engagement with Africa, see Chapter 1, Section 3, "China's Strategic Aims in Africa.") Janes assesses that PLA bases could crop up in Venezuela or Panama due to the high degree of economic leverage China has over both countries.[196]

Wherever they emerge, future PLA bases in the region are likely to be co-located with ports. Commander of U.S. Southern Command Admiral Craig Faller said in October 2019 that Chinese firms were involved in around 56 port deals in the region, some of which entail long-term leasing arrangements.[197] Several of these deals involve the Panama Canal, the Western Hemisphere's most important commercial and logistics hub through which two-thirds of ships coming to or from the United States pass, and access to which is vital for U.S. military vessels.[198] While Hong Kong-based firm Hutchinson (formerly known as Hutchison-Whampoa) continues to operate the ports of Balboa and Cristóbal on the Pacific and Atlantic sides of the Panama Canal for which it won concessions in 1999, Chinese firms' efforts to develop port, bridge, and energy infrastructure around the canal within the last five years have raised new concerns about Beijing's influence in this strategic area.*[199] For example, in 2017 Chinese investment firms Landbridge Group and Shanghai Gorgeous secured concessions worth $1 billion to construct a deep water port and container terminal at Margarita Island, Panama's largest port on the Atlantic side of the canal, which was to be built by Chinese construction company China Harbour Engineering Company.[200] Analysts expected that COSCO would become one of the port's key customers and worried the shipping company might seek to acquire the adjacent Taiwan-owned Evergreen port, a merger that if accomplished could allow COSCO to drive non-Chinese competitor ports around the canal out of business.[201] The project stalled after Panama's supreme court considered an appeal brought by concerned

*Other examples include China Harbour's moves in 2015 to express interest in building and financing a fourth set of locks in the canal; China Harbour's winning of a contract in 2017 to build a cruise terminal at Panama City's Amador Causeway; and the Panamanian government's decision to authorize a Chinese consortium to build a fourth bridge over the canal in 2018. *Panama Today*, "Chinese Consortium Starts Building Fourth Bridge over Panama Canal," December 4, 2018; *Maritime Executive*, "Panama Maritime Authority Signs for New Cruise Terminal," October 19, 2017; Simon Gardner and Elida Moreno, "Panama Canal Sets Sights on New $17 Billion Expansion Project," *Reuters*, March 26, 2015.

environmental groups.[202] Nonetheless, Chinese firms' growing influence around the canal led Admiral Kurt W. Tidd, the former commander of U.S. Southern Command, to note that China's "increased reach to key global access points like Panama create[s] commercial and security vulnerabilities for the United States."[203]

Implications for the United States

China's military power projection and expeditionary capabilities now present a serious threat to U.S. allies in East and Southeast Asia, with whom the United States has defense treaties or is required to defend as a result of other security obligations.* If the United States fails to respond to a PLA attack on one U.S. ally or partner, the others could lose confidence in Washington's commitment to defend them. Demoralized allies and partners could then become psychologically unwilling or physically unable to provide U.S. forces access to military facilities proximate to the battlefield, improving China's chances of prevailing in a contingency. The loss of U.S. allies and partners in East and Southeast Asia would have knock-on effects not only on U.S. security and economic interests, but also on the viability of democratic governance in the region precisely because many U.S. allies and partners are fellow democracies.

But if the United States comes to the defense of an ally or partner in the wake of a PLA attack, it must be prepared for the possibility of a costly and protracted conflict. The PLA's power projection capabilities enable it to harm U.S. forces and assets deployed to East or Southeast Asia, developments that could drain the United States' coffers, erode public morale, and cost U.S. lives. U.S. policymakers must therefore fully appreciate the potential ramifications of PLA power projection for the continued existence of the U.S. security architecture in East Asia, the success of democratic governance in the region.

Moreover, growing PLA capabilities will enable the force to contest U.S. interests across the globe. Though China's activities in regions beyond East and Southeast Asia appear small in scale, they are viewed by Beijing as a legitimate part of the U.S.-China competition and offer pretexts to deploy the PLA in ways that could undermine U.S. political or strategic influence in a given part of the world. It may not be so farfetched to imagine the PLA someday deploying to defend BRI infrastructure, support Beijing's preferred elites in a coup on an island nation, or prop up authoritarian allies. U.S. strategic interests could also be compromised by the PLA's gradually expanding military activity. For example, if PLA ships and submarines operate more frequently in the far seas, they could complicate efforts by the U.S. Navy to deploy from the eastern seaboard of the

*The United States has bilateral treaties entailing defense obligations with Japan, the Republic of Korea, and the Philippines; it is party to multilateral treaties that commit it to the defense of Australia and Thailand. The United States also has a piece of domestic legislation, the Taiwan Relations Act, that commits to provide defensive articles and services to Taiwan. The Taiwan Relations Act states that it is the policy of the United States 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;" to "make available to Taiwan such defense articles and defense services in such quantity as may be necessary to enable Taiwan to maintain a sufficient self-defense capability;" and to "maintain the capacity… 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." Taiwan Relations Act, Pub. L. No. 96–8, 1979.

United States to an African contingency, or from Bahrain to an East Asian contingency.

The PLA's growing power projection capabilities and confidence also require the United States to consider how to manage interactions with Chinese forces that could escalate into conflict. A more capable and confident PLA might be willing to employ greater amounts of force at the initial stages of a conflict to quickly control, contain, or terminate it. Such actions differ from those U.S. military planners have heretofore assumed, requiring a reexamination of the differences between U.S. and Chinese escalation control strategies. But a more confident PLA may also have a much larger appetite for risk than was true in the past, presenting another variable that U.S. military planners must factor into their calculations when assessing a potential standoff with Chinese forces in the Indo-Pacific or other regions of the world.

Finally, the centrality of military-civil fusion to PLA power projection and expeditionary capabilities poses new challenges for the United States as it evaluates the security risks stemming from Chinese companies' global investments in critical infrastructure. The PLA increasingly leverages Chinese civilian research, expertise, and resources to enhance its expeditionary capabilities, drawing upon civilian assets such as commercial ports, shipping companies, and airlines during some types of overseas operations. Chinese companies in the United States and in allied countries may be acquiring logistics infrastructure that could enhance the PLA's power projection and expeditionary capabilities. U.S. entities' commercial collaboration with Beijing—be it in logistics, telecommunications, or shipping—may enhance China's global power projection.

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