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Enabling a More Externally Focused and Operational PLA – 2020 PLA Conference Papers

Lucie Béraud-Sudreau

David Brewster

Christopher Cairns

Roger Cliff

R. Evan Ellis

See next page for additional authors

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Authors

Lucie Béraud-Sudreau, David Brewster, Christopher Cairns, Roger Cliff, R. Evan Ellis, April Herlevi, Roy Kamphausen Mr., Roderick Lee, Paul Nantulya, Meia Nouwens, Rebecca Pincus, and Joel Wuthnow

CONFERENCE PAPERS

ENABLING A MORE EXTERNALLY FOCUSED AND OPERATIONAL PLA

Roger Cliff
Roy D. Kamphausen
Editors

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Enabling a More Externally Focused and Operational PLA

Roger Cliff
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July 2022



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Soldiers of the Chinese People's Liberation Army - 2011

Soldiers of the Chinese People's Liberation Army 1st Amphibious Mechanized Infantry Division prepare to provide Chairman of the Joint Chiefs of Staff Adm. Mike Mullen with a demonstration of their capabilities during a visit to the unit in China on July 12, 2011. Mullen is on a three-day trip to the country meeting with counterparts and Chinese leaders.

Photo by: DoD photo by Mass Communication Specialist 1st Class Chad J. McNeeley, July 12-13, 2011 - China

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Foreword

As China seeks to exert its power and influence around the world, its military, the People's Liberation Army, will be an increasingly important instrument of these efforts. Twenty years ago, the People's Liberation Army rarely ventured beyond China's borders. Today, this observation no longer holds true. The People's Liberation Army now engages in numerous joint exercises and training events with foreign militaries each year, participates in a wide range of bilateral and multilateral security dialogues and forums, deploys forces to several UN peacekeeping operations, and frequently conducts humanitarian assistance and disaster relief missions. Moreover, the People's Liberation Army is developing the capabilities to conduct combat missions outside its immediate periphery, although the organization has not been involved in combat since the 1980s. Therefore, aside from the possibility of conflict between the United States and China in the western Pacific area, the US military will increasingly have to take account of the presence and activities of the People's Liberation Army throughout the world.

The conference papers in this book examine the People's Liberation Army's current and possible future activities beyond the confines of East Asia; analyze China's military relations with the continents of Europe, Africa, and Latin America; assess the People's Liberation Army's activities in the Indian Ocean, Oceania, and the polar regions; and contain focused studies of the roles of two key organizations: the People's Liberation Army Rocket Force and the Joint Logistic Support Force. Collectively, the book provides a comprehensive picture of a military organization that is extending its reach to all corners of the globe.

The United States' status as the only nation with a military presence throughout the world is coming to an end. Beijing clearly seeks to take its place alongside the United States as a global military power. This book examines China's current trajectory and its potential effects on the future world order.

Carol V. Evans

Carol V. Evans
Director, Strategic Studies Institute
and US Army War College Press

Executive Summary

Although the Chinese People's Liberation Army (PLA) is not yet a global, expeditionary force on par with the US military, the former has nevertheless significantly expanded its ability to operate abroad. To better understand the People's Liberation Army's capabilities to conduct overseas missions, this volume examines China's military relations with Europe, Africa, and Latin America; the country's military activities in the Indian Ocean, polar regions, and Pacific Island countries; and the emerging roles of the PLA Rocket Force and Joint Logistic Support Force.

The authors of the chapter on Europe find China's military relations in the continent consist primarily of port calls, joint exercises, seminars, and high-level officer exchanges. In addition, China continues to produce weapon systems that were licensed by European countries before the EU's 1989 post-Tiananmen Square embargo on arms sales to China. Furthermore, Beijing attempts to acquire European military technology through a variety of other means.

The vast majority of China's military interactions with Africa, by contrast, consist of senior officer and personnel exchanges; only a small fraction are exercises or port calls. In addition, significant numbers of African military personnel continue to be educated at China's institutions for professional military education.

China's engagement with Latin America and the Caribbean has expanded substantially over the past 25 years, with notable areas of interaction including sales of Chinese military equipment to countries in the region, China's participation in the UN Stabilization Mission in Haiti, visits to the region by PLA Navy ships, and education and training exchanges.

China's access to the Indian Ocean region is constrained by the semienclosed geography of the ocean and the Great Himalaya mountain range. Beijing has sought to mitigate these constraints by developing new land routes through Pakistan and Myanmar, constructing maritime logistical infrastructure in the Indian Ocean, developing air access points, and opportunistically building political partnerships with Indian Ocean states.

In the polar regions, China's activities have been primarily diplomatic and scientific. Though China has yet to send military forces into the Arctic, Chinese naval vessels have been seen in the Bering Sea, and, in 2017, the PLA Navy took part in joint exercises with Russia in the Baltic Sea. In the Antarctic, PLA assets are used to resupply and operate China's research stations.

China's military interactions with the Pacific Island countries have been limited. But PLA Navy ship visits have incrementally increased over time. Although some have speculated China is establishing bases in Fiji, Kiribati, and Vanuatu, so far, no Chinese military facilities have been established in any of the Pacific Island countries.

The role of the PLA Rocket Force may be changing because it is gradually losing its monopoly on nuclear counterattack and conventional, long-range, precision strike capabilities to the People's Liberation Army's other services. The People's Liberation Army has also integrated portions of the PLA Rocket Force's operational force into the joint theater command-and-control system.

The recently created Joint Logistic Support Force is the PLA's primary agent for joint logistics for domestic and regional contingencies. The Joint Logistic Support Force has no significant overseas responsibilities at present. In the future, the Joint Logistic Support Force could become an important supporting actor, but the four services of the People's Liberation Army will likely retain the lead role.

Introduction

Roger Cliff and Roy Kamphausen

This book is the result of a 2020 conference on the Chinese People's Liberation Army (PLA) entitled, "Enabling a More Externally Focused and Operational PLA." The conference, cosponsored by the National Bureau of Asian Research and the US Army War College Strategic Studies Institute, was held October 26, 28, and 29, 2020. It was the 28th in a series on the People's Liberation Army that has been held near-annually since 1990. The Strategic Studies Institute has hosted the conference, which has come to be known as "the Carlisle Conference," on the US Army War College campus in Carlisle, Pennsylvania, since 1999. Due to COVID-19, however, the 2020 conference was conducted virtually.

The conference examined the capabilities of the People's Liberation Army to conduct operations beyond its immediate periphery. Although it is not yet a global, expeditionary force on par with the US military, the People's Liberation Army has nevertheless significantly expanded its ability to operate abroad. Through enhanced technological capabilities, robust relationships with foreign militaries, increased access to overseas military bases or dual-use facilities, and the implementation of major structural reforms, the People's Liberation Army has built a more integrated, joint force capable of conducting a wider and more complex array of missions. To understand these developments better, the National Bureau of Asian Research and the Strategic Studies Institute invited a dozen experts in the field to write papers on different aspects of the topic and present them at the conference. Independent discussants provided detailed comments on each paper, both at the conference and in writing afterward. The eight chapters between this introduction and the afterword are versions of papers presented at the conference that have been revised based on comments and suggestions from the discussants and editors and the authors' additional research. Topics covered by the papers include China's military relations with Europe and Africa; China's military access to the Indian Ocean, polar regions, and Pacific Island countries (PICs); and the emerging roles of the PLA Rocket Force (PLARF) and Joint Logistic Support Force.

China's Military Relations with Europe, Africa, and Latin America

Chapters 1, 2, and 3 examine China's relations with major regions of the world. In chapter 1, Lucie Béraud-Sudreau and Meia Nouwens describe the development of military relations between China and Europe over the past two decades. They focus on two areas in particular—direct, military-to-military interactions and technology transfers—and observe the People's Liberation Army has had relatively frequent, bilateral, military-to-military interactions with mainly Western European countries. These interactions have included port calls, joint exercises, seminars, and exchanges between high-level officers. In addition, China has had military interactions with Europe through two multilateral organizations: NATO and the EU.

Béraud-Sudreau and Nouwens acknowledge virtually all of China's military-to-military interactions with European countries have focused on topics other than military combat, such as medical support, humanitarian relief, counterterrorism, and counterpiracy operations. Nonetheless, these interactions have included activities such as tactical movement, helicopter operations, naval gunnery exercises, and refueling at sea that have obvious applicability to military combat operations. They also examine transfers of both military technology and dual-use technologies. In the area of military technology, the authors find most European "exports" of weapon systems and other military technology consist of the production of systems, such as helicopters, jet engines, and anti-aircraft artillery, for which licenses were granted to China before the EU's 1989 post-Tiananmen Square embargo on arms sales to the country. In addition, the value of European arms sales to China has generally trended downward.

According to Béraud-Sudreau and Nouwens, transfers of dual-use technology result from a frequent Chinese requirement for European companies to transfer production technology in exchange for access to the Chinese market; the Chinese government's efforts to recruit talented scientists and researchers from overseas, including Europe; and the People's Liberation Army sending personnel, covertly and overtly, to Europe to collaborate with research institutes there. Béraud-Sudreau and Nouwens also note the weak and inconsistent European mechanisms for screening Chinese investments in critical industries, technologies, and infrastructure in Europe.

In chapter 2, Paul Nantulya examines the People's Liberation Army's relationships with African countries. Nantulya begins by describing the provision of military skills and training in leadership and command to Africa's anticolonial and anti-apartheid movements during Africa's independence struggles. He notes African fighters were taught military skills and how to conduct political and ideological work. According to Nantulya, after attaining independence, most of the revolutionary groups China had mentored and trained continued to employ both PLA doctrine and the Chinese development model. The intimate relationships China built with Africa's anticolonial and anti-apartheid movements have allowed Beijing to maintain significant social capital with each subsequent generation of political and military leaders in those countries. Next, Nantulya explains that Beijing, after a brief period in the 1980s when China turned away from Africa and the rest of the developing world to focus on attracting trade and investment from the West, renewed its attention toward the continent in the wake of the crushing of China's prodemocratic movement in 1989 and the collapse of communism in Eastern Europe.

Looking at the overall pattern of China's military relations with Africa, Nantulya finds the majority of interactions have been senior officer and personnel exchanges, with only a small fraction being exercises or port calls. In addition, significant numbers of African military personnel continue to be educated at China's institutions for professional military education. Although Africans view the strategic training offered by the United States and other Western militaries as superior to the People's Liberation Army's, the PLA training model at the junior and middle levels is considered to be excellent and more relevant to African needs in technical areas, such as information technology and computers, logistics, and military medicine. In addition, the large proportion of African military personnel in the People's Liberation Army's training programs means they are seen as an

opportunity for African military professionals to network with and learn from their counterparts from other African countries.

In chapter 3, Evan Ellis examines China's military and police engagement with Latin America and the Caribbean. This engagement has expanded substantially over the past 25 years. Sales of military equipment, for instance, have moved from military clothing and nonlethal equipment to radar, fighter and transport aircraft, armored vehicles, and patrol ships with an increasingly broad set of partners. Military engagement has included an eight-year presence in the UN Stabilization Mission in Haiti, multiple visits to the region by the PLA Navy's hospital ship *Peace Ark*, regular port calls, the participation of PLA forces in the region's elite military training schools, and the hosting of Latin American defense personnel in China for courses of increasing length and sophistication.

Ellis observes China's security relationships with Latin American and Caribbean countries can be grouped into four categories: those with anti-US communist and populist regimes, those with "diversity-of-partner" regimes, those with strongly US-aligned regimes, and those with regimes that do not diplomatically recognize the People's Republic of China. Anti-US communist and populist regimes such as Cuba, Venezuela, and, previously, Argentina, Bolivia, and Ecuador are the leading purchasers of arms from Chinese companies. These countries maintain strong institutional relationships with the People's Liberation Army. So far, however, China has not openly sought to establish permanent military facilities in these countries or to conduct anti-US military exercises.

Diversity-of-partner regimes, such as Brazil, Peru, Uruguay, and many Caribbean nations, seek to maintain good military relations with China and the United States and other countries. Diversity-of-partner countries often purchase or receive donations of Chinese-made military and police equipment and regularly send personnel to China for institutional visits and training and education.

Strongly US-aligned regimes such as Chile and Colombia limit their acquisitions of military equipment from and other interactions with China to avoid harming their relationships with the United States. Nonetheless, these regimes have accepted equipment donations from China, sent their officers to military courses in the country, conducted institutional exchanges with the People's Liberation Army, and occasionally conducted exercises with the organization.

The countries in the region that do not diplomatically recognize the People's Republic of China do not conduct military exchanges with the People's Liberation Army, receive PLA Navy ships or other operational units, or acquire Chinese military equipment.

China's Military Access to the Indian Ocean, Polar Regions, and Pacific Islands

The next section examines China's military access to three geographic areas of particular interest: the Indian Ocean, the polar regions, and the PICs. Chapter 4 by David Brewster analyzes PLA operational access to the Indian Ocean region (IOR) from the perspective of geographic constraints and the Soviet experience during the Cold War. The geographic constraints include the ocean being

largely enclosed on three sides, with few maritime entry points from other bodies of water; the vast distances across the water, with few islands in between; and the Great Himalaya mountain range cutting off much of Eurasia from easy access to the Indian Ocean. The semienclosed geography of the Indian Ocean has created a premium for powers that can gain control of the maritime chokepoints of entry into the ocean from the Pacific Ocean, Atlantic Ocean, and Mediterranean Sea, and the dearth of islands in the Indian Ocean places a premium on access to local airfields for staging and logistical support. The combination of these two factors with the scarcity of overland pathways between the Eurasian hinterland and the Indian Ocean, moreover, makes gaining physical access to the Indian Ocean particularly difficult for continental powers such as China and Russia.

In reviewing the Soviet Union's experience with operational access to the IOR during the Cold War, Brewster notes Moscow was constrained by its lack of direct access to the Indian Ocean and was only able to establish onshore naval support facilities in Ethiopia, Somalia, and South Yemen, each of which are in or near the Horn of Africa, and Iraq in the Persian Gulf. Elsewhere, the Soviets were forced to rely on support vessels anchored in "floating bases" in international waters and commercial logistical support in India, Seychelles, Singapore, and elsewhere. Before the late 1970s, Soviet air presence in the Indian Ocean was even more constrained because it depended on the ability of long-range aircraft to fly from Soviet territory or Cam Ranh Bay in Vietnam. By the late 1970s, the Soviets had acquired air bases, access to air facilities, and staging rights in and around the Horn of Africa, but Soviet access to air bases or staging points elsewhere in the IOR remained very limited.

Brewster observes China, facing the same geographic challenges the Soviet Union did, is seeking to mitigate them through four main lines of effort: developing new land routes to the Indian Ocean through Pakistan and Myanmar, maritime logistical infrastructure in the Indian Ocean to support an extended naval presence, and air access points, and opportunistically building political partnerships with IOR states.

In chapter 5, Rebecca Pincus analyzes China's interests and activities in the polar regions as a way of understanding the possible future course of PLA operations in the Arctic and Antarctic regions. Pincus begins by noting because it has no sovereign territory in the polar regions, China's interests in these regions are primarily economic and scientific. The country's economic interests in these regions include mineral resources, such as hydrocarbons and metal ores, and living marine sources in the form of potentially rich fish stocks. She also notes the possibility of shipping routes across the Arctic.

China's scientific interests in these regions include understanding and predicting the future of global climate change. Polar science also provides China with an opportunity to build relationships and develop influence with other nations that are conducting polar science research. Polar science, moreover, provides a justification for developing capabilities to operate in the polar environment that may be useful to the People's Liberation Army in the future.

Pincus notes as China's economic interests in the polar regions grow, the People's Liberation Army could be called upon to protect these interests. In addition, China has strategic interests that involve the polar regions. The sourcing of oil and gas from Russia via the Northern Sea Route

reduces China's "Malacca Dilemma"—China's dependence on energy imports that pass through the Strait of Malacca. And the PLA Navy has shown an interest in the development of polar-capable ballistic missile submarines, which would increase the survivability of the sea-based element of China's nuclear deterrent.

Pincus follows her discussion of China's interests in the polar regions with a review of its recent activities. In the diplomatic arena, these activities include participating as an observer in the Arctic Council and being a signatory of multiple international agreements that touch on the polar regions.

In the area of scientific activity, Pincus notes in the Arctic, China has bilateral research ventures with Iceland, Russia, and Sweden, and an independent research station in Norway. In Antarctica, China operates four scientific research bases, and the country is currently constructing a fifth.

In the military realm, Pincus observes China has yet to send military forces into the Arctic, but Chinese naval vessels have been seen in the Bering Sea, and, in 2017, a small group of PLA Navy vessels participated in joint exercises with Russia in the Baltic Sea. In the Southern Ocean, China uses PLA assets to resupply and operate the country's research stations.

In chapter 6, April Herlevi and Christopher Cairns examine the People's Liberation Army's interactions with the PICs. The authors begin by describing China's overarching maritime ambitions, which include exploiting marine resources, developing China's marine economy, protecting China's marine ecological environment, safeguarding the country's maritime rights and interests, and building China into a maritime power. They note a desire to acquire operational access is not the sole driver of PLA engagement with the PICs, and PLA activities follow China's larger economic and diplomatic interests.

In the area of military diplomacy and related naval activity, Herlevi and Cairns note China's military diplomatic interactions with the PICs have been limited. Visits by PLA Navy ships, however, have incrementally increased over time, and medical diplomacy has been an important component of these visits. Herlevi and Cairns note, although some have speculated about the country establishing bases in Fiji, Kiribati, and Vanuatu, so far, Beijing has not established any military facilities in the PICs. In general, they find China's defense diplomacy in the PICs is strongly associated with Chinese civilian diplomatic efforts.

Herlevi and Cairns describe several obstacles to a more robust Chinese military presence in the PICs. One obstacle is the agency of the PICs, which, despite welcoming aid and economic ties from China, have been clear they are not willing to sacrifice their domestic interests at the behest of Beijing. Another obstacle is several PICs diplomatically recognize the Republic of China (Taiwan). As long as a country recognizes Taiwan, China will not directly engage with the country or provide it with aid. A third obstacle is the presence of the United States and other external actors, including Australia, New Zealand, and others, who have sought to maintain their own influence in the PICs.

Emerging Roles of the PLA Rocket Force and Joint Logistic Support Force

The final section examines the roles of two key components of the People's Liberation Army: the PLA Rocket Force and the recently created Joint Logistic Support Force. In 2015, the Second Artillery Corps was renamed the PLA Rocket Force, and its status changed from an independent branch to a service. In chapter 7, Roderick Lee argues the PLA Rocket Force's role within the People's Liberation Army may also be changing. Specifically, Lee notes, the PLA Rocket Force no longer has a monopoly on nuclear counterattack capabilities within the army and is gradually losing its relative share of these capabilities to the PLA Navy and PLA Air Force. In addition, the PLA Rocket Force is quickly losing its relative share of conventional, long-range, precision-strike capabilities to the navy, air force, and even the PLA Ground Force. At the same time, Lee notes the People's Liberation Army has integrated portions of the PLA Rocket Force's operational force into the joint theater command and control system. The net result of these changes is a service that is less distinct from the other services and more closely integrated with them.

Lee bases his argument the People's Liberation Army has integrated large portions of the PLA Rocket Force's operational force into the joint theater command-and-control system on several observations. First, he notes an authoritative 2016 PLA publication shows PLARF units are subordinate to a joint theater command. In addition, he cites multiple PLA media reports that refer to specific PLARF brigades as belonging to certain theater commands. Finally, he notes some PLARF officers are permanently assigned to theater commands in proportions that appear to correspond with the overall proportion of PLARF personnel within the People's Liberation Army.

In addition to his assessment of the PLA Rocket Force's changing status within the People's Liberation Army, Lee examines the service's participation in military operations other than war. He notes all such known activities in recent years have been limited to domestic disaster relief, and, unlike the other three services, the PLA Rocket Force appears to have had a virtually nonexistent role in military operations other than war outside of China. Lee observes, however, PLARF personnel could be deployed abroad to provide technical support and to help operate the missiles China has sold abroad, as occurred when China sold Dongfeng 3 intermediate-range missiles to Saudi Arabia in the late 1980s.

In chapter 8, Joel Wuthnow examines possible future roles for the PLA Joint Logistic Support Force, which was created in 2016. Wuthnow notes the force is the primary agent for joint logistics for domestic and regional contingencies, with "joint logistics" covering the provision of common-use materials, such as food, clothing, and some types of ammunition, and common-use services, such as medical services, transportation, and construction. According to Wuthnow, the People's Liberation Army created its current joint logistics structure in response to both operational and financial concerns. The structure consists of a central base in Wuhan directing five Joint Logistic Support Centers—one in each of the PLA's five theater commands. The Joint Logistic Support Force, however, has no significant overseas responsibilities at present.

Beyond China's immediate periphery, Wuthnow states three different logistical support models have been employed, usually in combination with each other. The first model involves forces deploying with all the equipment, supplies, and support personnel that are needed for the duration of the deployment. The second model entails relying on external actors for support. For example, China has relied on the UN for peacekeeping deployments and on foreign ports and foreign and Chinese companies for rest, resupply, and services for naval task forces. The third model involves overseas military facilities. Currently, the only such facility is in Djibouti, but others may be acquired in the future. One reason the Joint Logistic Support Force has not played a significant role in China's overseas deployments may be most overseas operations have been small and confined to a single service.

By 2030, Wuthnow postulates, larger and more complex missions could create a rationale for joint logistical support to expeditionary operations. If China's military remains preoccupied with domestic and regional contingencies, overseas operations will likely focus on sea-lane protection and military operations other than war. Under this scenario, the Joint Logistic Support Force would become an important supporting actor, but the services would retain the lead role. If by 2030 China has achieved a more secure domestic environment and resolved some territorial disputes, allowing the military to conduct more ambitious overseas operations, then the Joint Logistic Support Force could become an overarching coordinator for transportation and sustainment and deploy logistics personnel in greater numbers.

Afterword

In the afterword, one of the authors of this introduction, Roy Kamphausen, reflects on the National Bureau of Asian Research's 15 years cosponsoring the Carlisle PLA conference. Kamphausen notes the conferences have grown from a small gathering of PLA specialists held at a private estate in Virginia in 1990 to an event that attracted more than 110 people in 2018, the most recent year of in-person attendance. He acknowledges the many individuals who have contributed to the conferences and discusses how the composition of conference participants has changed over time, from predominantly current and former foreign area officers to a younger and more diverse cohort. The author also comments on how the focus of the conferences has evolved from detailed analyses of the People's Liberation Army to assessments of the implications for the United States of China's growing military power. Kamphausen highlights major contributions by conference participants over the years, assesses the current state of PLA studies, and poses six questions he believes the PLA-watching community needs to address. He concludes by highlighting the need for PLA specialists to continue to talk with operators and strategists in ways that inform plan development in support of contingencies.

Sino-European Military Cooperation in the Twenty-First Century: From Friends to “Frenemies?”

Lucie Béraud-Sudreau and Meia Nouwens

Introduction

For historical and geographical reasons, European states have not been the People’s Republic of China’s (PRC) privileged partners for military cooperation. Nonetheless, the People’s Liberation Army (PLA) cooperates with European militaries, and the former benefits from this cooperation in different ways, contributing to the organization’s ability to deploy and to its operational capacity. Joint, bilateral exercises between Chinese and European militaries have focused on operations other than war. Contrary to popular thought, Eastern European militaries do not have particularly more numerous or intensive interactions with the People’s Liberation Army than Western European armies; the exceptions to this rule are Serbia and Belarus. The People’s Liberation Army has engaged diplomatically and practically with European militaries through EU and NATO counterpiracy operations. But hardening views of China in the EU and NATO are making military-to-military engagement increasingly unlikely in the future. Europe also plays an arms transfer role. Western European countries export more conventional military equipment than Eastern European countries do because of the former’s larger domestic defense industries. Should this trend decrease, the People’s Liberation Army would face limited consequences due to China’s rise in conventional military production capacities. China, however, leverages European, dual-use, emerging and frontier technologies and innovation through licit and illicit means for military purposes.¹ Despite growing awareness of China’s leveraging of these technologies, EU regulations and investment screening measures to protect domestic innovation are still unevenly applied in EU and NATO countries, leaving the door open for further technology transfer.

1. Mathieu Duchâtel, “Intangible Technology Transfers in EU-China Relations,” in *Guns, Engines and Turbines: The EU’s Hard Power in Asia*, Chaillot Paper no. 149 (Paris: EU Institute for Security Studies, 2018); and European Council, “China: Declaration by the High Representative on Behalf of the European Union Urging Chinese Authorities to Take Action against Malicious Cyber Activities Undertaken from Its Territory,” news release no. 11:35, July 19, 2021, <https://www.consilium.europa.eu/en/press/press-releases/2021/07/19/declaration-by-the-high-representative-on-behalf-of-the-eu-urging-china-to-take-action-against-malicious-cyber-activities-undertaken-from-its-territory/>.

Introduction:

Diverging Security Interests between China and European States

For historical and geographical reasons, European states have not been the PRC's privileged partners for military cooperation. Common security interests are limited to "other than war" areas, such as counterterrorism, humanitarian assistance, and peacekeeping. Nonetheless, the People's Liberation Army cooperates with European militaries, and the former benefits from this cooperation in different ways, contributing to the organization's ability to deploy and to its operational capacity.

Theoretically, efforts at cooperation between European militaries and the People's Liberation Army should face no obstacle. Individually, European states do not consider China to be a direct military threat and vice versa. But contrasting views on state sovereignty, territorial integrity, and human rights have created friction in the Sino-European relationship.² In addition, increasingly, the two parties have diverging security interests. Chinese ambitions and military activities have increasingly been contradicting European states' worldviews and strategic interests. For instance, the PRC's naval expansion raises France's concerns about its own Indo-Pacific strategy, and China's initiative to promote cooperation in central and Eastern Europe (the 17+1 format) can be seen as a tentative effort to intrude into the EU's sphere of influence.³ The emergence of conflicting interests against the backdrop of deteriorating Sino-American relations could constrain European willingness to engage in military cooperation with the People's Liberation Army.

Given this widening gap between Chinese and European security interests, this chapter addresses the overarching question: How has Sino-European military cooperation helped the People's Liberation Army in the past, and what are the likely prospects for the future? In other words, is China's increasingly assertive foreign and military policy turning Europeans from friends into "frenemies?" This effect could become problematic because European armed forces are overall better trained and more developed than those of China's traditional partners in Asia, Africa, and Latin America. These questions will be answered by looking at two key dimensions of military cooperation: military-to-military relations (for example, joint exercises) and technology transfers. These dimensions were chosen based on the premise they are key areas of military cooperation in which the People's Liberation Army could learn from its European counterparts and available sources of information could provide data for quantitative and qualitative assessments. This chapter also addresses two subquestions.

- To what extent has the People's Liberation Army learned from military cooperation with European countries, and, therefore, what does the organization have to lose if this cooperation declines?

2. Emil J. Kirchner, Thomas Christiansen, and Han Dorussen, ed., *Security Relations between China and the European Union: From Convergence to Cooperation?* (Cambridge, UK: Cambridge University Press, 2016), 1–18.

3. "The Indo-Pacific Area: A Priority for France," Ministry for Europe and Foreign Affairs (website), updated March 2022, <https://www.diplomatie.gouv.fr/fr/dossiers-pays/asia-oceanie/l-espace-indopacifique-une-priorite-pour-la-france/>; and Pierre Morcos, "France's Shifting Relations with China," War on the Rocks, January 4, 2022, <https://warontherocks.com/2022/01/frances-shifting-relations-with-china/>.

- Do European states' attitudes vary, and, if so, which states are the most likely (or unlikely) to want to pursue or increase military cooperation with the People's Liberation Army?

This chapter includes Chinese relations with all European countries in a geographical sense and examines regional institutions such as the EU and NATO as a basis for analysis, given their relevance in military and foreign policy affairs. Russia was not included in the study because the country's military ties with China are quite different than those of other European countries in nature and scale.

Sino-European Military-to-Military Relations

China and Europe's military-to-military interactions remain limited in scale (European countries are not China's primary partner for military cooperation) and scope (these interactions are limited to other-than-war operations). Nonetheless, some of these interactions have been learning opportunities for the People's Liberation Army; indeed, China's participation in multilateral exercises with the EU and NATO have helped the country learn about counterpiracy.

Limited Bilateral Interactions with European Armed Forces

This subsection explores exercises, high-level military visits, and port calls between Chinese and European armed forces at a bilateral level. These interactions are based on two data sets. The National Defense University published the first data set, which surveyed PLA multilateral, military exercises; naval port calls; and senior-level visits between 2003 and 2016.⁴ The second data set is based on the authors' data collection to complement the National Defense University's data set by covering recent years.

A first finding is Eastern European armies do not appear to have more numerous or more intensive interactions with the People's Liberation Army than their Western European counterparts. This contradicts assumptions former communist regimes would forge closer ties with China as well as the supposed purpose of the 17+1 forum with central and Eastern European countries.⁵ Romania and Bulgaria only have limited military-to-military relations with China, and Albania has almost none.⁶ Serbia and Belarus are the only two exceptions, as discussed later in the chapter.

Europe was the second region by share of PLA military diplomatic interactions between 2003 and 2016 after Asia. No European state was in the top 10 states where the PLA Navy (PLAN)

4. Kenneth Allen, Philip C. Saunders, and John Chen, *Chinese Military Diplomacy 2003–2016: Trends and Implications*, China Strategic Perspectives no. 11 (Washington, DC: Institute for National Strategic Studies, July 2017).

5. US-China Economic and Security Review Commission, *2018 Report to Congress of the US-China Economic and Security Review Commission* (Washington, DC: US Government Publishing Office, November 2018), 15; and David Hutt and Richard Q. Turcsányi, "No, China Has Not Bought Central and Eastern Europe," *Foreign Policy* (website), May 27, 2020, <https://foreignpolicy.com/2020/05/27/china-has-not-bought-central-eastern-europe/>.

6. Rachael Rudolph, "NATO, China and the BSEC 4–Turkey, Romania, Bulgaria and Albania," New York Center for Foreign Policy Affairs (website), May 28, 2020, <http://nycfpa.org/main/nato-china-and-the-bsec-4-turkey-romania-bulgaria-and-albania/>.

made port calls. Only Poland and Germany appeared in the top 10 most-visited countries, with 11 and 10 visits respectively, the latter being the same number of visits as Myanmar, Pakistan, and Singapore. These numbers are lower than Russia's 36 visits and the United States' 24 visits. France is the only European country in the top 10 of states with which the People's Liberation Army had the highest number of military interactions and exercises but no combat exercises.⁷ Between 2003 and 2016, both Eastern and Western European countries had regular interactions with the People's Liberation Army.

The more recent data collected for this paper confirm this trend. The PLA Navy has made a high number of port calls since 2016. Countries that received PLAN ships include Belgium, Denmark, Finland, France, Germany, Greece, Italy, Latvia, Poland, Portugal, and the United Kingdom.⁸ But joint exercises occurred during only some of these visits. In 2017 in Denmark, a joint exercise focused on “formation communication, formation movement and helicopter landing.”⁹ The same year, joint exercises with the French Navy and the Italian Navy that featured an additional anti-piracy dimension occurred.¹⁰ Furthermore, Chinese military personnel visiting London attended a humanitarian seminar, and, in Greece, military personnel visited the navy's training center.¹¹ Such PLAN visits occur more regularly with Western and Southern European countries, which arguably have more miles of coastline.

High-level visits of military officers are more evenly distributed between Western and Eastern Europe. Since 2016, Chinese defense officials have held high-level meetings with their European counterparts in Armenia, Belarus, Czechia, France, Germany, Greece, Hungary, Poland, Romania, Serbia, Switzerland, and the United Kingdom.¹² But no concrete results have emerged from these visits, and no signs indicate some of the visits were more meaningful than others. Occasionally, hints of exchanges of military personnel for training purposes surfaced: In 2019, Hungary signed a memorandum of understanding for “cooperation between military healthcare

7. Allen, Saunders, and Chen, *Chinese Military Diplomacy*, 46–53.

8. “Wei Fenghe Met with the Vietnamese Ambassador to China,” Ministry of National Defense of the People's Republic of China (PRC) (website), n.d., <http://www.mod.gov.cn/diplomacy/index.htm>.

9. Xinhua News Agency, “中国海军第二十六批护航编队结束对丹麦的友好访问” [The Chinese navy's 26th escort fleet concludes friendly visit to Denmark], *Military.china.com*, September 30, 2017, http://military.china.com.cn/2017-09/30/content_41670918.htm.

10. Lin Jian 林健, “第26批护航编队圆满结束对法国的友好访问启程回国” [The 26th escort fleet concludes friendly visit to France and is on course to return home], Ministry of National Defense of the PRC (website), October 19, 2017, http://www.mod.gov.cn/diplomacy/2017-10/19/content_4795049.htm (page discontinued); and Xu Shouming 许寿明 and Li Jie 李洁, “中国海军远航访问编队结束访问离开意大利” [The Chinese navy has concluded its visit to Italy and is prepared to depart], Ministry of National Defense of the PRC (website), July 15, 2017, http://www.mod.gov.cn/diplomacy/2017-07/15/content_4785837.htm (page discontinued).

11. Zhang Dailei 张代蕾 and Jin Jing 金晶, “中国海军第二十六批护航编队结束友好访英后离开伦敦” [The Chinese navy's 26th escort fleet leaves London after friendly visit to the UK], Ministry of National Defense of the PRC (website), October 8, 2017, http://www.mod.gov.cn/diplomacy/2017-10/08/content_4794114.htm (page discontinued); and Xu Shouming 许寿明 and Mei Yunlong 梅云龙, “中国海军远航访问编队结束访问离开希腊” [The Chinese navy concludes visit to and leaves Greece], *Xinhuanet* (website), July 26, 2017, http://www.xinhuanet.com/politics/2017-07/26/c_129664537.htm.

12. Kang Yubin, “Exchanges and Cooperation Fruitful between China and UK Militaries,” *China Global Television Network* (website), July 28, 2018, https://news.cgtn.com/news/3d3d514e326b444d79457a6333566d54/share_p.html; and “Plan d'action pour les relations Franco-Chinoises” [Action plan for Sino-French relations], *Élysée* (website), November 6, 2019, <https://www.elysee.fr/emmanuel-macron/2019/11/06/plan-daction-pour-les-relations-franco-chinoises>.

services.”¹³ Hungary, like France, received personnel from the Chinese People’s Armed Police Force—a paramilitary force—for training courses and exchanges of counterterrorism techniques. People’s Armed Police personnel also went to Romania and Azerbaijan to act as instructors.¹⁴ The United Kingdom also cooperates with Beijing for “college education and personnel training.”¹⁵

Finally, some bilateral exercises occurred between the People’s Liberation Army and European armed forces that focused mainly on military operations other than war (MOOTW). The Sino-German “Combined Aid” exercise involves military medical support exercises. The 2019 iteration focused on responding to humanitarian or natural disasters and treating a large amount of simultaneous casualties.¹⁶ This exercise represented the first time China deployed armored vehicles to Europe.¹⁷ A tabletop exercise with the United Kingdom in 2016 “simulated evacuating people from an unnamed third country in a civil war beset by terrorism.”¹⁸ In addition, Spain and China held a joint medical rescue drill in Djibouti in 2018.¹⁹ Following a multinational exercise (Multilateral Naval Exercise KOMODO 2016), the French Navy, harbored in Qingdao, conducted tactical movement and “fire on floating target” exercises with a Chinese frigate. This exercise is the only example of a joint exercise that does not fall under the category of MOOTW. Thus, European armed forces, like those of other countries, sometimes participate in multinational exercises alongside the People’s Liberation Army.²⁰

A second finding is the People’s Liberation Army’s deepest relationships are with Belarus and Serbia. These European countries are the only two that received Chinese weapon systems between 2010 and 2019.²¹ Serbia and China’s militaries signed a cooperation agreement in 2008 that included

13. “Hungarian Minister of Defence Visits China,” China Military Online (website), November 28, 2019, http://eng.chinamil.com.cn/view/2019-11/28/content_9685106.htm.

14. “The People’s Armed Police Force,” Ministry of National Defense of the PRC (website), n.d., <http://eng.mod.gov.cn/ArmedForces/armed.htm> (page discontinued).

15. “China, Britain to Strengthen Military Ties,” Xinhuanet (website), March 31, 2015, http://www.xinhuanet.com//mil/2015-03/31/c_127641303.htm.

16. “China-Germany ‘Combined Aid-2019’ Exercise Wraps Up,” China Military Online, July 15, 2019, http://eng.chinamil.com.cn/view/2019-07/15/content_9558199.htm; and “China-Germany Joint Exercise Provides References for International Joint Humanitarian Medical Rescue,” China Military Online (website), July 10, 2019, http://eng.chinamil.com.cn/view/2019-07/10/content_9553899.htm.

17. Ryan Pickrell, “The Chinese Military Has Deployed Armored Vehicles to Europe for the First Time as Chinese Medics Train in Germany,” Business Insider (website), July 10, 2019, <https://www.businessinsider.com/chinese-military-deploys-armored-vehicles-to-europe-for-first-time-2019-7>.

18. US-China Economic and Security Review Commission, *2016 Report to Congress of the US-China Economic and Security Review Commission* (Washington, DC: US Government Publishing Office, November 2016), 222; and Zhao Lei, “Drill Simulates Joint Evacuation,” *China Daily* (website), March 25, 2016, http://www.chinadaily.com.cn/world/cn_eu/2016-03/25/content_24082587.htm.

19. “China, Spain Hold Medical Rescue Drill in Djibouti,” China Military Online, December 4, 2018, http://eng.chinamil.com.cn/view/2018-12/04/content_9366133.htm; and Zhang Qingbao 张庆宝 and *PLA Daily*, “我驻吉布提保障基地与西班牙海军开展联合医疗演练” [Djibouti support base forces and the Spanish navy conduct joint medical exercises], Ministry of National Defense of the PRC (website), December 4, 2018, http://www.mod.gov.cn/action/2018-12/04/content_4831116.htm.

20. “FAPF-FANC: Coopération militaire Franco-Chinoise en mer de Chine,” Ministry of Armed Forces (website), May 13, 2016, <https://www.defense.gouv.fr/english/operations/prepositionnees/forces-de-souverainete/nouvelle-caledonie/actualite/fapf-fanc-cooperation-militaire-franco-chinoise-en-mer-de-chine> (page discontinued); and “Military Balance+,” International Institute for Strategic Studies (website), accessed in August 2020, <https://www.iiss.org/publications/the-military-balance-plus>.

21. “Trade Registers,” Stockholm International Peace Research Institute (SIPRI) Arms Transfer Database (website), n.d., https://armstrade.sipri.org/armstrade/page/trade_register.php.

training military personnel in disaster relief. In addition, between 2008 and 2018, China contributed the second-highest amount of military equipment to Serbia; the highest came from the United States.²² Nonetheless, the defense relationship between Serbia and China remains weaker than that between Serbia and the United States, Russia, or the EU.²³ Although Serbia conducts a dozen military exercises with NATO and its member states annually, Serbia's first joint exercise with China was expected to take place in 2020.²⁴ This joint-strike exercise was supposed to also include Belarus.²⁵ Whether this exercise took place is unclear due to COVID-19 and the 2020 stolen election and subsequent protests in Belarus.

The higher intensity of Chinese cooperation with Belarus can be seen from both interactions and high-level visits. In 2019, the Chinese military took part in the Belarus Independence Day parade.²⁶ Correspondingly, in 2015, Belarusian soldiers participated in the China Victory Day parade for the 70th anniversary of the end of World War II. Serbia was the other European country participating in this event.²⁷ Furthermore, Chinese and Belarusian special forces undertook the “Eagle Assault” joint training exercise (focused on counterterrorism) in 2018.²⁸ Also, China has apparently attempted to sell more military equipment to Belarus, as evidenced by a delegation from China's defense state-owned enterprises visiting Belarus in 2017.²⁹

Although Ukraine is a key partner of the Chinese defense industry, as discussed later in the chapter, Sino-Ukrainian military-to-military interactions are not as extensive as those between Belarus and Serbia.

Overall, bilateral, military-to-military relations between the People's Liberation Army and European armed forces appear to be limited and the areas of cooperation restricted to MOOTW. If port calls were to be suspended, PLA engagement with Western militaries would shrink dramatically. A similar pattern emerges when considering PLA cooperation with the EU and NATO.

22. Veerle Nouwens and Emily Ferris, *Sino-Russian Interests in Serbia: Competitive, Coordinated or Complementary?* (London: Royal United Services Institute for Defence and Security Studies, August 2020), 16.

23. Christopher Hartwell and Katarzyna Sidlo, *Serbia's Cooperation with China, the European Union, Russia and the United States of America* (Brussels: European Parliament Directorate-General for External Policies, November 2017), 41.

24. Jelena Milic, “China Is Not Replacing the West in Serbia,” *Diplomat* (website), April 3, 2020, <https://thedi diplomat.com/2020/04/china-is-not-replacing-the-west-in-serbia/>.

25. “Serbian Military in First Bilateral Exercises with Chinese, Belarus Forces,” N1 (website), January 23, 2020, <https://rs.n1info.com/english/news/a563060-serbian-military-in-first-bilateral-exercises-with-chinese-belarus-forces/>.

26. Chen Zhuo, “Chinese Military Takes Part in Belarus Independence Day Parade,” China Military Online (website), July 4, 2019, http://eng.chinamil.com.cn/view/2019-07/04/content_9547928.htm.

27. “Foreign Troops from 17 Countries Train for V-Day Parade in Beijing,” *China Daily* (website), August 26, 2015, http://www.chinadaily.com.cn/world/2015victoryanniv/2015-08/26/content_21716250.htm.

28. Du Weichao 杜未超 and Qiu Chengliang 仇成梁, “‘雄鹰突击-2018’中白特种部队联训开训” [‘Eagle Assault-2018’ Sino-Belarusian joint training starts], China Military Online (website), August 6, 2018, http://www.mod.gov.cn/action/2018-08/06/content_4821902.htm.

29. Huang Panyue, “Belarus, China Agree on Further Steps in Military Technical Cooperation,” China Military Online (website), December 14, 2017, http://eng.chinamil.com.cn/view/2017-12/14/content_7867789.htm (page discontinued).

The Chinese Military's Relations with the EU and NATO

Although bilateral, military-to-military ties between the People's Liberation Army and European militaries are limited, China has also engaged with Europe through its multinational institutions. This section shows Beijing leverages institutional engagement with the EU and NATO where possible. The section also demonstrates the organizational structures of these two institutions induce countries to be less hesitant to engage than in the past, resulting in a pattern of ad hoc engagement with the People's Liberation Army since the early 2000s. Nevertheless, this channel of engagement is narrowing as member-state governments have become more critical of China.

The EU and NATO's political views of China's rise and military modernization have evolved over the past few years. But for the last two decades, NATO and the EU have promoted engagement and military-to-military exchanges with the People's Liberation Army. China's political engagement with NATO began in the early 2000s as the former began to engage more globally on security matters and the Chinese and NATO spheres of interest began to converge.³⁰ From Beijing's perspective, NATO activities were approaching China's backyard as a result of the membership of Central Asian countries in NATO's Partnership for Peace Programme as well as NATO's role in Afghanistan. In addition, China has adopted Russia's complaints about the enlargement of NATO.³¹ As relations between China and NATO normalized, bilateral, political dialogue spanned areas of common interest, such as terrorism, maritime piracy, international security, the proliferation of weapons of mass destruction, and crisis management. This dialogue continued at regular intervals and various levels of seniority, including the division commander level, and ultimately led to military-to-military interactions starting in 2007.³²

The official relationship between the EU and China has followed a similar path. Until 2019, the EU was less critical of China and more inclined toward engagement.³³ In 2003, the EU and China established a "comprehensive strategic partnership" and characterized their relationship as "based on a positive agenda of partnership coupled with the constructive management of differences." In late May 2018, a European Council report on security cooperation in Asia listed China as a country with which the EU could complement "existing or future dialogues with capacity building where appropriate, training programmes and joint exercises" and "expand mil-mil contacts."³⁴

The EU and NATO's practical cooperation with the People's Liberation Army has been limited and ad hoc. In both cases, military-to-military cooperation has taken the form of reciprocal

30. Jonathan Marcus, "China Seeks Dialogue with NATO," *BBC News* (website), November 14, 2002, <http://news.bbc.co.uk/1/hi/world/asia-pacific/2478897.stm>.

31. "特朗普上台后北约将何去何从" [Where will NATO go after Trump takes office?], Xinhuanet (website), January 25, 2017, http://www.xinhuanet.com/mil/2017-01/25/c_129460746.htm.

32. Anders Fogh Rasmussen, "NATO – Delivering Security in the 21st Century" (speech, Chatham House, London, United Kingdom, July 7, 2012), https://www.nato.int/cps/en/natohq/opinions_88886.htm; and "China Willing to Strengthen Ties with NATO," *China Daily* (website), May 25, 2007, http://www.chinadaily.com.cn/china/2007-05/25/content_880191.htm.

33. Federica Mogherini, *EU-China – A Strategic Outlook* (Strasbourg, FR: European Commission, March 12, 2019).

34. General Secretariat of the Council to Delegations, memorandum, 9265/1/18 REV 1, "Outcome of Proceedings: Enhanced EU Security Cooperation in and with Asia," May 28, 2018, Brussels, BE, <https://www.consilium.europa.eu/media/35456/st09265-re01-en18.pdf>.

institutional visits and has focused on collaboration in counterpiracy operations. The People's Liberation Army has shown regular interest in academic exchanges with the NATO Defense College as an opportunity to learn from NATO's experience and to develop mechanisms for "better and quicker information exchange related to possible interaction between navy forces (the Navy call them Passing Exercises, PASSEX), etc."³⁵

But the greatest PLA source of learning from European institutions has been through joining EU and NATO counterpiracy efforts in the Gulf of Aden. This participation has included informal defense diplomatic engagement between the People's Liberation Army and the navies of EU and NATO countries—for instance, hosting commanders on reciprocal ship visits.³⁶ These visits, according to NATO reporting, provided commanders from both sides with the "opportunity to share information and experiences about their counter-piracy operations, learn more of each other's capabilities and also discuss matters of mutual concern in how to tackle piracy."³⁷ Similarly, in 2018, EU Naval Force Somalia Operational Commander Major General Charlie Stickland visited the PLA base in Djibouti to discuss counterpiracy tactics with PLAN Senior Captain Liang Yang.³⁸

Practical exercises have also been held between EU or NATO navies and the PLA Navy. Considering the PLA's largely unilateral approach to anti-piracy, any exercises with the navies of NATO and the EU Naval Force have been ad hoc and opportunistic. On rare occasions, these exercises coincided with important political events. For example, ahead of Chinese President Xi Jinping's visit to the EU in March 2014, the EU Naval Force's French ship *Sirocco* and German frigate *Hessen* conducted a joint counterpiracy exercise in the Gulf of Aden with PLAN ships *Yancheng* and *Taihu*.

Joint exercises serve clear purposes in building operational and planning skills, thereby broadening the scope of scenarios in which the People's Liberation Army would be capable of intervening. According to senior officers at China's National Defense University, these exercises are useful opportunities for the PLA Navy to gain experience it otherwise would lack. One senior PLA officer at the National Defense University's strategy institute stated, "[T]he results of participating in this kind of action are not just about gaining experience at combating pirates. It is even more about raising the ability to perform missions on seas far away."³⁹ Michael McDevitt refers to these ad hoc, collaborative exercises as a "battle laboratory" for the People's Liberation Army.⁴⁰ McDevitt argues, although these exercises with Western navies often seem mundane, they are critically important to the PLA Navy if it is to operate effectively outside of East Asia. The PLA Navy, McDevitt states,

35. "NATO and China Resume Military Staff to Staff Talks," NATO (website), June 5, 2018, https://www.nato.int/cps/en/natohq/news_155840.htm; and "The Defence Advisor of the People's Republic of China to the EU Visits the NDC," NATO (website), June 26, 2012, <https://www.ndc.nato.int/news/news.php?icode=412>.

36. "NATO and China Cooperate to Fight Piracy," NATO (website), January 19, 2012, https://www.nato.int/cps/en/SID-53705498-08986390/natolive/news_83585.htm.

37. "NATO and China."

38. "EU NAVFOR Discusses Counter-Piracy Tactics with Chinese Naval Forces," EU Naval Force (NAVFOR) Somalia (website), August 8, 2018, <https://eunavfor.eu/news/eu-navfor-discusses-counter-piracy-tactics-chinese-naval-forces>.

39. Richard Weitz, "Operation Somalia: China's First Expeditionary Force," *China Security* 5, no. 1 (Winter 2009): 27–42.

40. Roy Kamphausen and Travis Tanner, "Introduction: PLA Lessons Learned from Increasingly Realistic Exercises," in *Learning by Doing: The PLA Trains at Home and Abroad*, ed. Roy Kamphausen, David Lai, and Travis Tanner (Carlisle, PA: Strategic Studies Institute, US Army War College Press, November 2012), 1–17.

has gained valuable knowledge of ship design and the capabilities needed for operation at sea for sustained periods of time, the management of logistics for sustaining forces away from home for extended periods of time, and the operation of navies independently in near-combat operations.

Indeed, reviews of past exercises with European navies show the PLA Navy to also have practiced refueling at sea, transfers of crews at sea, joint piracy boarding operations, medical evacuation, and small-arms and helicopter exercises.⁴¹ Joint planning has also been practiced, such as in October 2018, during the first combined exercise between the EU Naval Force and the PLA Navy at the PLA base in Djibouti.⁴²

Similarly, as a result of participation in joint exercises, the PLA Navy has learned about foreign navies' communication and surveillance methods. The PLA Navy used the web-based intelligence sharing and communication platform Mercury Net during its anti-piracy missions—a network that was common to all international anti-piracy forces. The commander of the first Gulf of Aden task force, Du Jingchen, stated after visiting Combined Task Force 151 and EU Naval Force flagships, “[T]he construction of [their] intelligence information security systems merit our studies. Foreign militaries have a complete, strict and tight intelligence security system, including satellite methods. [They] can carry out surveillance for the entire Gulf of Aden maritime region. We are still awaiting strengthening of development and usage in this regard.”⁴³ The usage of Mercury Net allowed the People's Liberation Army to learn “NATO-based communication protocols, nomenclature, and code words employed by Western forces to facilitate effective communication.”⁴⁴

The most recent military-to-military collaboration among the EU, NATO, and the People's Liberation Army (at the time of this writing) dates to 2018; since then, EU and NATO views on China have hardened significantly. In 2021, a speech by NATO Secretary General Jens Stoltenberg reflected China's rise and bilateral military relationship with Russia posed significant security consequences for NATO.⁴⁵ The EU has also become more critical of China, including its military modernization. The EU's 2019 *EU-China: A Strategic Outlook* referred to China as a systemic rival that promotes alternative models of governance and labeled China's military and technological rise as security risks for the EU.⁴⁶ Whether the EU and NATO will still be open to military-to-military engagements—in particular, practical exercises that build PLA skills—is questionable.

41. “EU Naval Force and Chinese Navy Warships Work Together in Counter Piracy Exercise at Sea in Gulf of Aden,” EU NAVFOR Somalia (website), March 28, 2014, <https://eunavfor.eu/news/eu-naval-force-and-chinese-navy-warships-work-together-counter-piracy-exercise-sea-gulf-aden>; and “EU NAVFOR and Chinese PLA(N): ‘An Ongoing Partnership,’” EU NAVFOR Somalia (website), December 3, 2018, <https://eunavfor.eu/news/eu-navfor-and-chinese-plan-ongoing-partnership>.

42. “EU NAVFOR Conducts First Exercise with Chinese PLA(N) in Djibouti,” EU NAVFOR Somalia (website), October 16, 2018, <https://eunavfor.eu/eu-navfor-conducts-first-exercise-with-chinese-plan-in-djibouti/> (page discontinued).

43. Cai Nianchi 蔡年迟, “远洋突击,我们历练了什么,人民海军执行护航任务两周军回眸” [Far oceans sudden attacks, what have we experienced and practiced? A military retrospective on the last two weeks of the Chinese navy's escort mission (part 2)], 人民海军 [People's Navy], December 22, 2010, quoted in Andrew S. Erickson and Austin M. Strange, *No Substitute for Experience: Chinese Antipiracy Operations in the Gulf of Aden*, China Maritime Studies Institute Red Book no. 10 (Newport, RI: China Maritime Studies Institute, US Naval War College Press, November 2013), 149.

44. Andrew Erickson and Austin Strange, “China and the International Antipiracy Effort,” *Diplomat* (website), November 1, 2013, <https://thediplomat.com/2013/11/china-and-the-international-antipiracy-effort/>.

45. Jens Stoltenberg, “Remarks by NATO Secretary General Jens Stoltenberg on Launching #NATO2030 – Strengthening the Alliance in an Increasingly Competitive World” (speech, Atlantic Council Front Page, Washington, DC, June 8, 2020), https://www.nato.int/cps/en/natohq/opinions_176197.htm.

46. Mogherini, *EU-China*.

Section 1 Key Findings

The key findings about PLA relations with the EU and NATO include the following.

- Eastern European armies other than those of Belarus and Serbia do not have particularly more numerous or intensive interactions with the People's Liberation Army than Western European armed forces do.
- Joint, bilateral exercises between Chinese and European militaries have focused on operations other than war.
- Both the EU and NATO have engaged with the People's Liberation Army in defense diplomatic terms and in practical counterpiracy efforts. Sources in the People's Liberation Army have discussed the utility of these engagements for the PLA Navy's learning and development.
- Hardening views of China in the EU and NATO make the continuation of such joint exercises increasingly unlikely in the future.

Technology Transfers: From Market Access Considerations to Growing Distrust

European military and dual-use technology transfers to China continue, despite growing awareness of how the transfers might benefit the People's Liberation Army. The main supplier of military technology to China appears to be France, and the exports show no sign of abating, although other countries such as Germany and the United Kingdom appeared to have reduced their exports as of 2018. In addition, the EU and its member states have only recently taken steps to limit the flow of dual-use technology to the People's Republic of China.

Conventional Arms Transfers: A Loosely Interpreted Arms Embargo

Although the EU (or, as it was known at the time, the European Community) imposed an arms embargo against the People's Republic of China in 1989, the implementation of this embargo has been ambiguous at times. This ambiguity is in part due to the vague formulation of the policy: "interruption by the Member States of the Community of military cooperation and an embargo on trade in arms with China."⁴⁷ European technology, including conventional military technology, has thus still benefited the development of PLA capabilities over the past 30 years, albeit to a limited extent. This subsection assesses which European countries have been, and still are, the most willing to export conventional military technologies to China and whether any signs point to these types of transfers having declined in recent years.

In this analysis, the first data set, which comes from the Stockholm International Peace Research Institute's Arms Transfer Database, reflects the value of conventional arms transfers. The

47. European Council, Presidency Conclusions, SN 254/2/89 (June 26–27, 1989), https://www.consilium.europa.eu/media/20589/1989_june_-_madrid__eng_.pdf.

database accounts for the volume of arms trade based on trend indicator values, a bespoke indicator that assigns a value to each weapon system based on known production costs.⁴⁸ The indicator measures weapon systems once delivered, and, most importantly, for European exports to the People’s Republic of China, the database includes licensed-produced systems as transfers. The database also includes major subsystems, such as engines and sensors.⁴⁹ See figure 1-1 for Western European arms transfers to China, 1990–2019, in trend indicator values (represented by “TIV”), and see figure 1-2 for Eastern European arms transfers to China during the same time period in trend indicator values (again, represented by “TIV”).⁵⁰ As a note, the data in these figures were accurate as of October 2020.

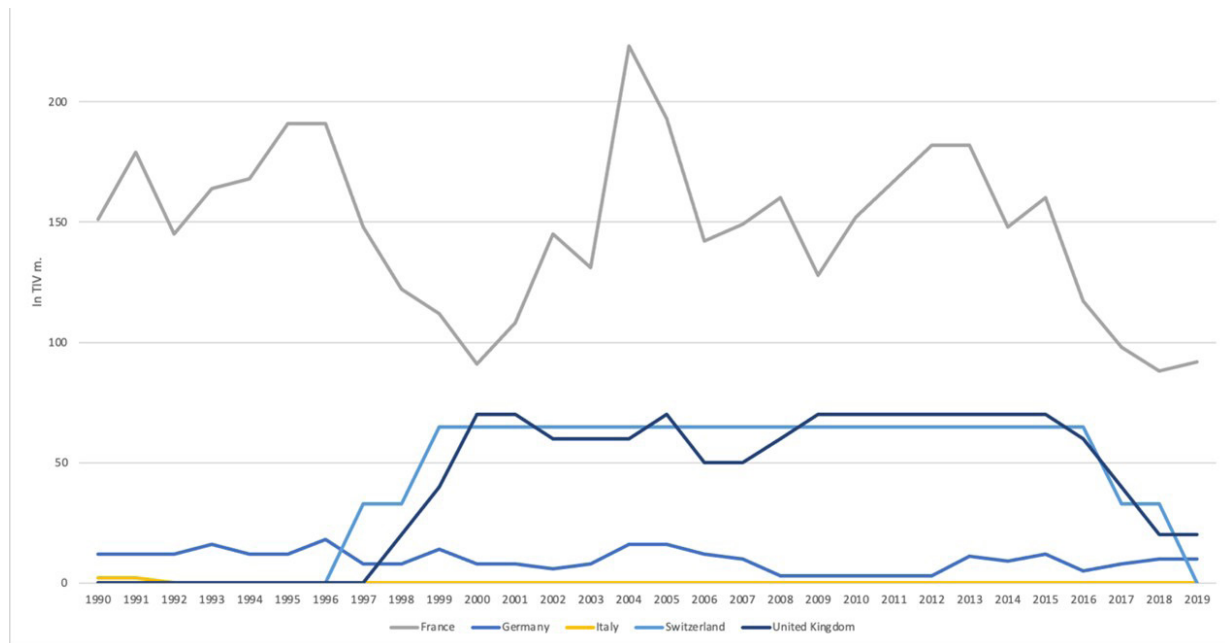


Figure 1-1. Western European arms transfers to China, 1990–2019

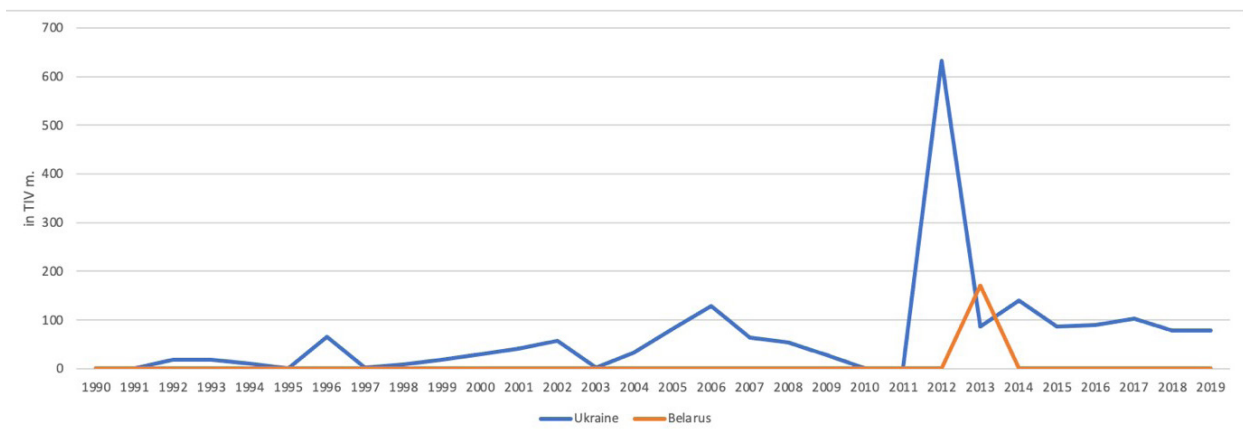


Figure 1-2. Eastern European arms transfers to China, 1990–2019

48. “SIPRI Arms Transfer Database,” SIPRI (website), n.d., <https://www.sipri.org/databases/armstransfers/>; and Paul Holtom, Mark Bromley, and Verena Simmel, *Measuring International Arms Transfers* (Stockholm: SIPRI, December 2012).

49. “Sources and Methods,” SIPRI (website), n.d., <https://www.sipri.org/databases/armstransfers/sources-and-methods>.

50. “Importer/Exporter TIV Tables,” SIPRI Arms Transfer Database (website), 2017, <https://armstrade.sipri.org/armstrade/page/values.php>.

France is the largest supplier of conventional weapon systems to China in Western Europe. But the bulk of French transfers is due to licenses for helicopter production that were granted to the People's Republic of China before 1989. The original license was for 50 helicopters, but, in the 1990s, China continued production beyond the authorized batch. Since then, the most widely produced helicopter is a variant of the French Eurocopter AS 365F anti-submarine warfare helicopter, designated the Harbin Z-9 in China. Although French companies are no longer involved in helicopter production in China, Safran Helicopter Engines (previously Turbomeca), an engine maker, still has a strong partnership with Aviation Industry Corporation of China. The company signed an agreement in 2005 to provide 160 Arriel 2C engines under license, another 80 in 2008, and 80 more in 2010.⁵¹ The licensed version of these engines was used for the Z-9.⁵² Other French-origin helicopters are the Z-8, which is a variant of the Aérospatiale SA 321 Super Frelon helicopter, and the Changhe Z-11, which is a copy of the Eurocopter AS 350 and AS 550 Fennec light helicopters.⁵³

The two other largest Western European exporters are the United Kingdom and Switzerland, and, again, the volume of exports is high due to licensed production. The United Kingdom exports the Rolls-Royce Spey turbofan engine, which is produced in China as the WS-9 Qinling for the Xi'an JH-7 combat aircraft. The same pattern applies for the Type 90 antiaircraft artillery system, a copy of the Swiss Oerlikon GDF system.⁵⁴

Transfers from these three countries, however, are declining. One explanation is the newest variants of Chinese systems are becoming so different from the European variants, the transfers are no longer accounted for as licensed in the Stockholm International Peace Research Institute database.

Figure 1-2 shows transfers from Eastern European countries—Belarus and Ukraine—have occurred occasionally. Belarus transferred an estimated five Ilyushin Il-76M secondhand military transport aircraft in 2013. Ukraine's transfers to China have consisted mostly of gas turbines and turbofans, some of which are produced in China, for PLAN ships. The Ukrainian transfers, which were not based on pre-1989 license agreements, have continued in recent years. For instance, Kyiv sold a secondhand aircraft carrier, the *Varyag*. China refurbished the aircraft carrier, after which it became the Type 001 *Liaoning*. In addition, between 2014 and 2016, Kyiv sold an estimated three Ilyushin Il-78M tanker and transport aircraft that were secondhand but probably modernized before delivery.⁵⁵

51. Jon Grevatt, "Safran, AVIC Agree to Expand Partnership," *Jane's Defence Weekly*, November 24, 2010; Jon Grevatt, "As China Eyes Benefits from Civil Expansion," *Jane's Defence Weekly*, November 24, 2010; "Signature between Turbomeca and Beijing Changkong Machinery for a Joint Venture Company," Defense-Aerospace.com (website), November 2, 2006, <http://www.defense-aerospace.com/article-view/release/75149/turbomeca-launches-chinese-joint-venture-company.html>; and "Turbomeca (Safran Group) and AVIC International / SAIC Signed a Contract for 80 Additional Arriel 2C Engine Kits," Safran Group (website), November 16, 2010, https://www.safran-group.com/media/20101116_turbomeca-safran-group-and-avic-international/saic-signed-contract-80-additional-arriel-2c-engine-kits (page discontinued).

52. Carl Otis Schuster, "China's Navy on the Horizon," *Proceedings* 138, no. 4 (April 2012): 38; Bai Wei, "China's Sea Dragons," *AirForces Monthly* 297 (December 2012): 73; Wendell Minnick and Pierre Tran, "China to Fit Attack Helo with European Engine," *Defense News*, February 8, 2010; and "Safran Helicopter Engines," Safran Group (website), n.d., <https://www.safran-helicopter-engines.com/helicopter-engines/lower-1000-shp/arriel/arriel-2c/2c2>.

53. "Changhe Z-8 Transport Helicopter," Airforce-technology.com, January 11, 2021, <https://www.airforce-technology.com/projects/changhez8transport/>; and "Z-11 Light Utility Helicopter," Military-Today.com, n.d., <http://www.military-today.com/helicopters/z11.htm>.

54. "Designation: TYPE 90," *Army Guide Monthly* (website), n.d., <http://www.army-guide.com/eng/product4185.html>.

55. "Trade Registers."

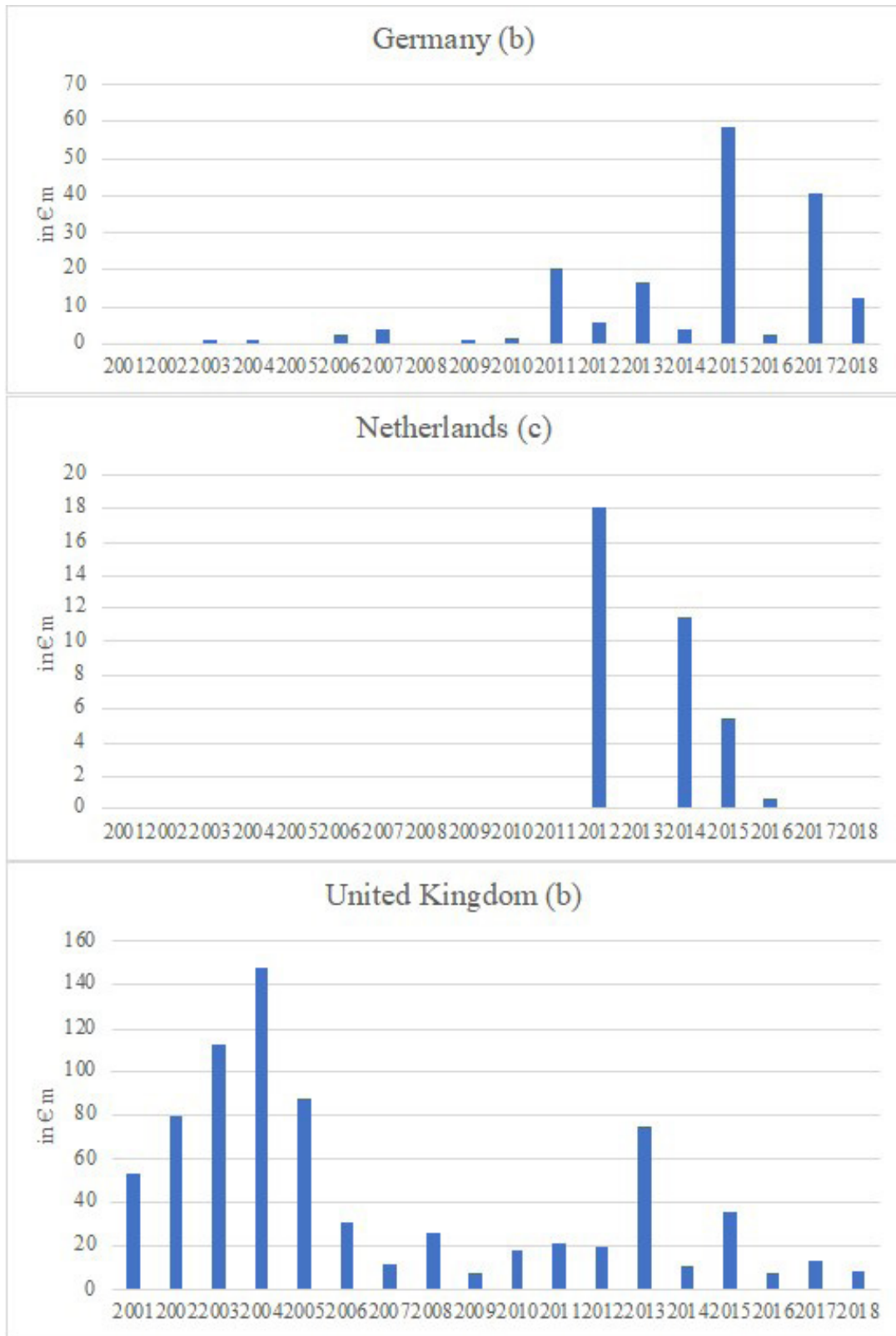


Figure 1-3. German and United Kingdom licenses (b) and Dutch exports (c)

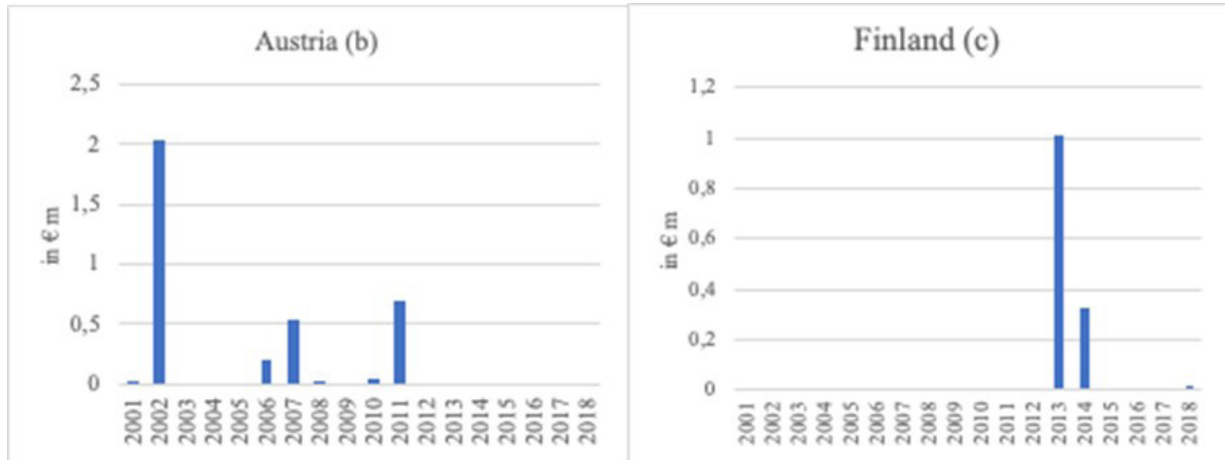


Figure 1-4. Austrian licenses (b) and Finnish exports (c)

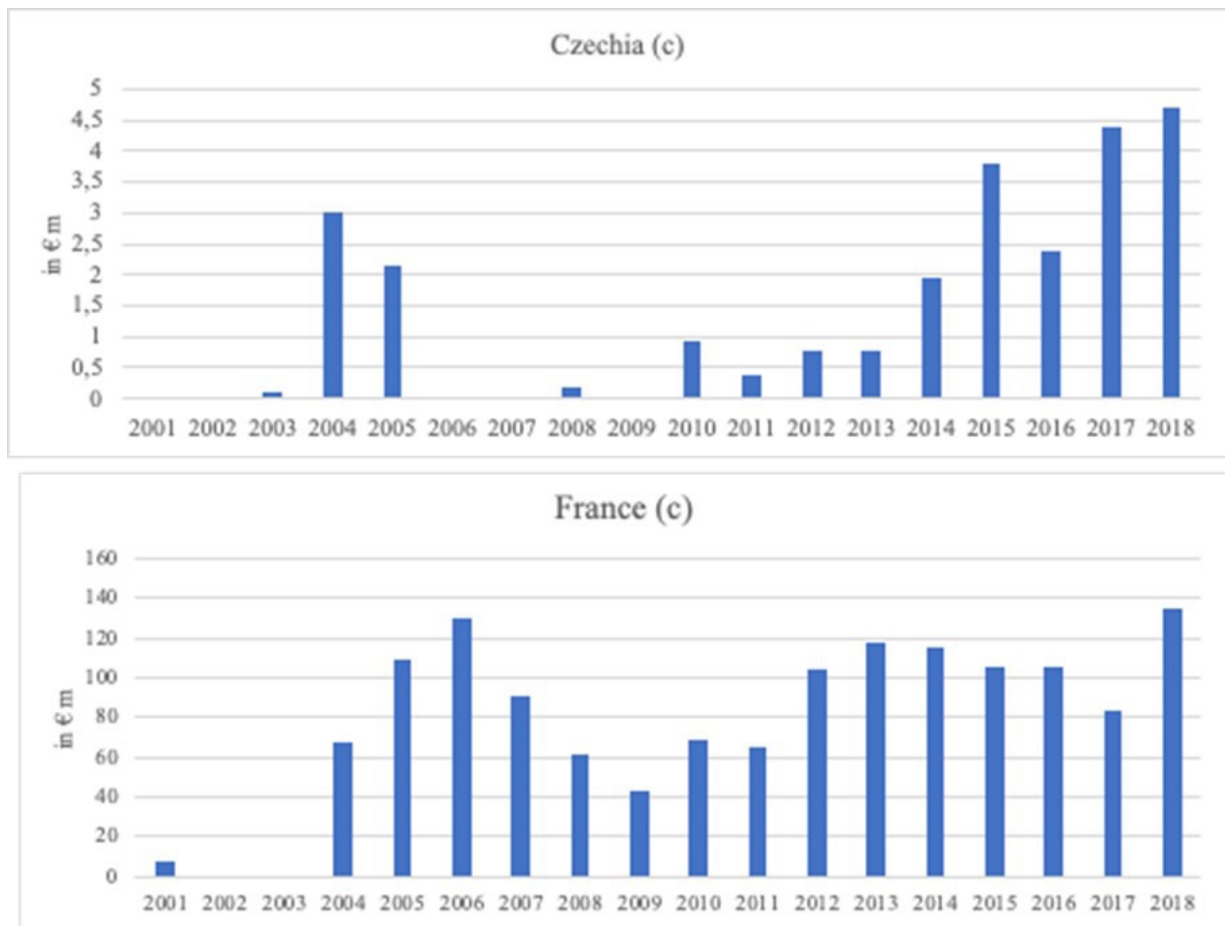


Figure 1-5. Czech and French exports (c)

A second data set comes from the European External Action Service annual reports on EU member states' arms exports.⁵⁶ The service's report shows a larger set of military technology transfers because the service's definition of "military technology" is broader than the Stockholm International Peace Research Institute's definition of conventional major weapon systems.⁵⁷ The data series show either the value of licenses (denoted by [b]) or the value of actual exports (denoted by [c]), per the European External Action Service reports' terminology, for the countries that have reported transfers to mainland China. See figure 1-3 for German and United Kingdom licenses and Dutch exports sent to China between 2001 and 2018, figure 1-4 for Austrian licenses and Finnish exports sent to China between 2001 and 2018, figure 1-5 for Czech and French exports to China between 2001 and 2018, and figure 1-6 for Slovakian licenses and Italian exports sent to China between 2001 and 2018. The authors have omitted Estonia, Latvia, Slovenia, and Spain, which reported licenses or exports that were valued under €1 million.

On the one hand, as shown in figure 1-3, the United Kingdom, the Netherlands, and Germany showed a decline in recent years, although this trend does not necessarily predict the countries licenses and exports to China will not increase again in the near future.⁵⁸ German licenses peaked

56. "Arms Export Control – Arms Trade Treaty," European External Action Service (website), March 5, 2019, https://eeas.europa.eu/headquarters/headquarters-homepage/8472/annual-reports-on-arms-exports-_en.

57. European Council, Common Military List of the European Union, 2019/C 95/01 (March 12, 2019), [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52019XG0312\(01\)&from=EN](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52019XG0312(01)&from=EN).

58. European Council, "Third Annual Report According to Operative Provision 8 of the European Union Code of Conduct on Arms Exports," *Official Journal of the European Communities* C:2001:351 (December 11, 2001); European Council, "Fourth Annual Report According to Operative Provision 8 of the European Union Code of Conduct on Arms Exports," *Official Journal of the European Communities* C:2002:319 (December 19, 2002); European Council, "Fifth Annual Report According to Operative Provision 8 of the European Union Code of Conduct on Arms Exports," *Official Journal of the European Union* C:2003:320 (December 31, 2003); European Council, "Sixth Annual Report According to Operative Provision 8 of the European Union Code of Conduct on Arms Exports," *Official Journal of the European Union* C:2004:316 (December 10, 2004); European Council, "Seventh Annual Report According to Operative Provision 8 of the European Union Code of Conduct on Arms Exports," *Official Journal of the European Union* C:2005:328 (December 23, 2005); European Council, "Eighth Annual Report According to Operative Provision 8 of the European Union Code of Conduct on Arms Exports," *Official Journal of the European Union* C:2006:250 (December 16, 2006); European Council, "Ninth Annual Report According to Operative Provision 8 of the European Union Code of Conduct on Arms Exports," *Official Journal of the European Union* C:2007:253 (October 26, 2007); European Council, "Tenth Annual Report According to Operative Provision 8 of the European Union Code of Conduct on Arms Exports," *Official Journal of the European Union* C:2008:300 (November 22, 2008); European Council, "Eleventh Annual Report According to Article 8(2) of Council Common Position 2008/944/CFSP Defining Common Rules Governing Control of Exports of Military Technology and Equipment," *Official Journal of the European Union* C:2009:265 (November 6, 2009); European Council, "Twelfth Annual Report According to Article 8(2) of Council Common Position 2008/944/CFSP Defining Common Rules Governing Control of Exports of Military Technology and Equipment," *Official Journal of the European Union* C:2011:9 (January 13, 2011); European Council, "Thirteenth Annual Report According to Article 8(2) of Council Common Position 2008/944/CFSP Defining Common Rules Governing Control of Exports of Military Technology and Equipment," *Official Journal of the European Union* C:2011:382 (December 30, 2011); European Council, "Fourteenth Annual Report According to Article 8(2) of Council Common Position 2008/944/CFSP Defining Common Rules Governing Control of Exports of Military Technology and Equipment," *Official Journal of the European Union* C:2012:386 (December 14, 2012); European Council, "Fifteenth Annual Report According to Article 8(2) of Council Common Position 2008/944/CFSP Defining Common Rules Governing Control of Exports of Military Technology and Equipment," *Official Journal of the European Union* C:2014:18 (January 21, 2014); European Council, "Sixteenth Annual Report According to Article 8(2) of Council Common Position 2008/944/CFSP Defining Common Rules Governing Control of Exports of Military Technology and Equipment," *Official Journal of the European Union* C:2015:103 (March 27, 2015); European Council, "Seventeenth Annual Report According to Article 8(2) of Council Common Position 2008/944/CFSP Defining Common Rules Governing Control of Exports of Military Technology and Equipment," *Official Journal of the European Union* C:2016:163 (May 4, 2016); European Council, "Eighteenth Annual Report According to Article 8(2) of Council Common Position 2008/944/CFSP Defining Common Rules Governing Control of Exports of Military Technology and Equipment," *Official Journal of the European Union* C:2017:153 (May 16, 2017); and European Council, "Revised Nineteenth Annual Report According to Article 8(2) of Council Common Position 2008/944/CFSP Defining Common Rules Governing Control of Exports of Military Technology and Equipment," *Official Journal of the European Union* C:2018:397 (October 31, 2018).

at €58.9 million in 2015 and fell to €12.3 million in 2018. For the Netherlands, actual exports rose to €18 million in 2012, then fell to €700,000 in 2016 and €0 in 2018. The United Kingdom’s arms licensing to China peaked at €147.6 million in 2004 and fell to €8.5 million in 2018. This downward trend started in the United Kingdom after the discussions on lifting the EU arms embargo against China were abandoned.

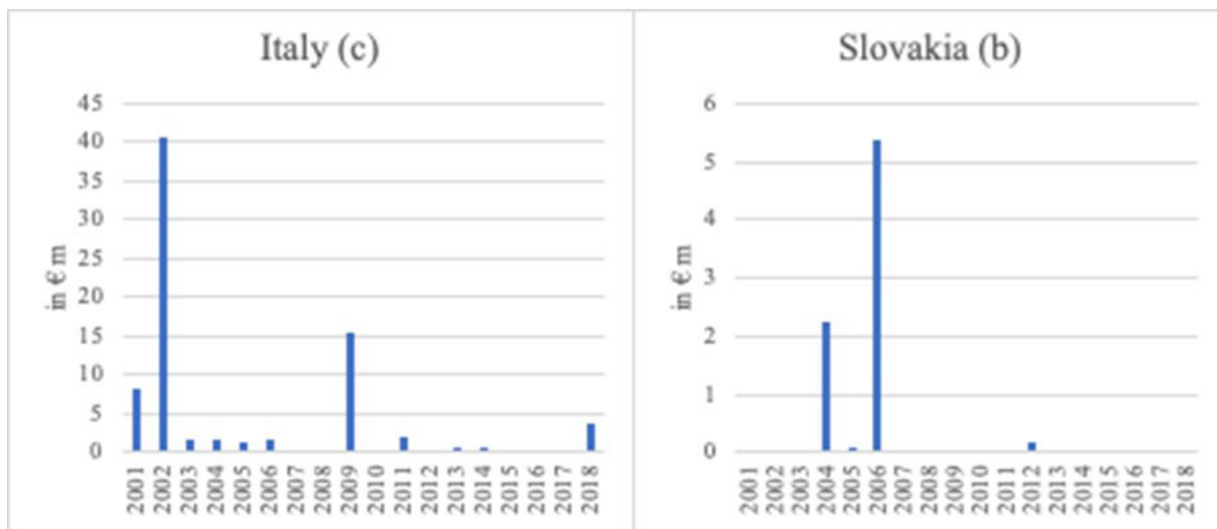


Figure 1-6. Slovakian licenses (b) and Italian exports (c)

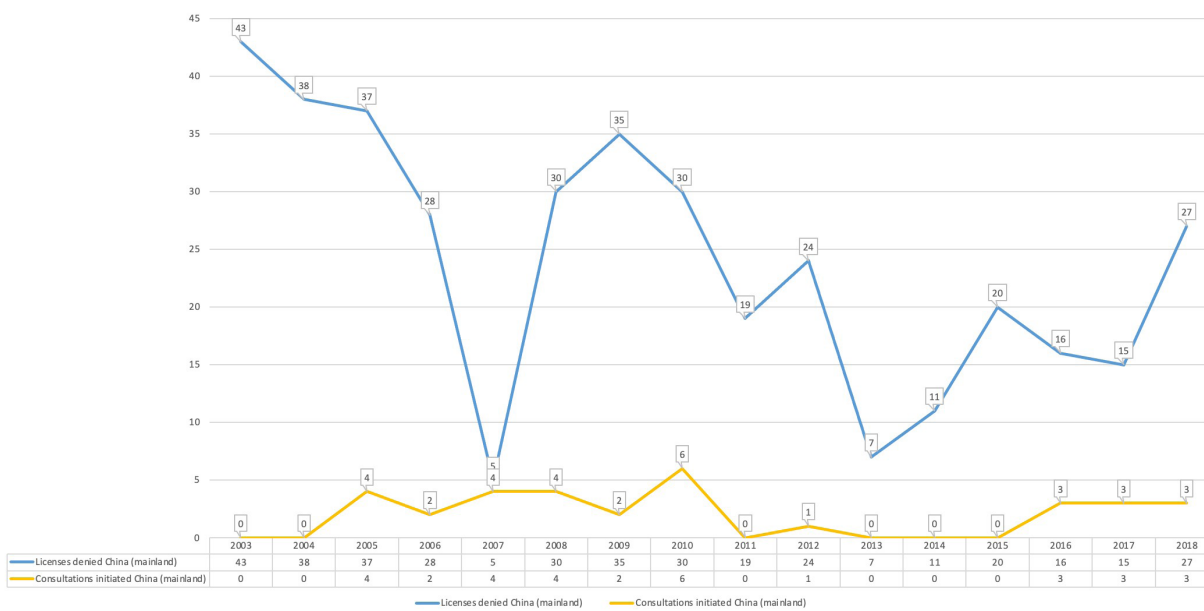


Figure 1-7. Number of licenses denied and intra-EU consultations initiated, 2003–18

But, as illustrated in figure 1-5, two other countries show a continuing upward trend of arms deliveries: France and Czechia. Although France was on a downward path between 2013 (€118 million of actual exports) and 2017 (€84.1 million), the value of exports grew again in 2018 (€134 million). Czechia delivered €4.7 million of exports in 2018. Around 75 percent of Czechia's deliveries that year were for the EU ML10 category (€3.5 million).⁵⁹ Although France does not break down its exports using the EU "ML" categories, in 2018, France's largest license values were granted in the categories of ML10 (€30.7 million) and ML15 (€179.3 million). ML10 consists of aircraft and related equipment, and ML15 covers imaging or countermeasure equipment.⁶⁰ For these two countries, therefore, military technology transfers have continued in the most recent years for which data is available.

Another type of indicator provided by the European External Action Service reports is the number of licenses denied per country (more specifically, how many times EU member states refused to grant a license for an arms-exporting company) and the number of consultations initiated among member states. The latter mechanism occurs because EU member states are expected to consult each other when an identical transaction occurs after a license has been denied.⁶¹

One would expect these numbers to rise in recent years as tensions with China have become more evident. But, as shown in figure 1-7, although the number of licenses denied between 2017 (15) and 2018 (27) rose, this number is still lower than the levels observed during the 2000s. In particular, immediately after the discussions on lifting the arms embargo in 2003–04, far more licenses were denied. These statistics might indicate licenses to China were more sensitive at the time. Figure 1-7 depicts the number of licenses denied and intra-EU consultations initiated for China from 2003 to 2018.

The three indicators should be revisited in the next couple years to see if a declining trend in European military technology transfer emerges. Whether European countries have reacted to China's growing assertiveness, conflicting security interests, and US pressure by limiting the People's Liberation Army's access to European military technology and equipment remains to be seen.

The level of transfers from Western Europe is higher than that of Eastern Europe, but this observation is hardly surprising given Western Europe's arms industrial base is larger.⁶²

These transfers ceasing completely would not necessarily be a major loss for the People's Liberation Army because deliveries have generally been limited in scope (at most, between €100 and €150

59. European Council, *Nineteenth Annual Report*.

60. European Council, *Nineteenth Annual Report*.

61. European Council, "Council Common Position 2008/944/CFSP of 8 December 2008 Defining Common Rules Governing Control of Exports of Military Technology and Equipment," *Official Journal of the European Union* L:2008:335 (December 13, 2008).

62. European Council, *Third Annual Report*; European Council, *Fourth Annual Report*; European Council, *Fifth Annual Report*; European Council, *Sixth Annual Report*; European Council, *Seventh Annual Report*; European Council, *Eighth Annual Report*; European Council, *Ninth Annual Report*; European Council, *Tenth Annual Report*; European Council, *Eleventh Annual Report*; European Council, *Twelfth Annual Report*; European Council, *Thirteenth Annual Report*; European Council, *Fourteenth Annual Report*; European Council, *Fifteenth Annual Report*; European Council, *Sixteenth Annual Report*; European Council, *Seventeenth Annual Report*; European Council, *Eighteenth Annual Report*; and European Council, *Nineteenth Annual Report*.

million). This level of sales might have been more impactful in the past in assisting China's arms industry and, therefore, the People's Liberation Army to acquire new technologies. But one can assume in 2022, the Chinese arms industry has developed sufficient capabilities to indigenously produce most of the key technologies the People's Liberation Army requires for its major equipment.⁶³

Emerging Technologies: European Transfers and Chinese Acquisitions

Aside from the transfer of conventional weapons technologies, dual-use technological transfers from Europe to China have recently come into increasing focus. This increased focus is partly due to President Xi Jinping's reaffirmation in 2017 of China's pursuit of "Military-Civil Fusion" (军民融合), further integrating China's civilian and defense industrial complexes. This section finds awareness is rising about China's ability to leverage European technology from the private sector through both legal and illicit ways. But EU member states and NATO allies have yet to find common ground on investment screening practices to protect domestic innovation.

Technology transfer from Europe to China happens in both China and Europe. In China, national policies play a significant role in facilitating technology transfer. Firstly, cross-border data restrictions, data localization, and censorship requirements legally apply to both Chinese firms and foreign firms operating in China through laws such as the 2019 Cyberspace Administration of China's draft regulation titled, "Measures on Security Assessment on Cross-Border Transfer of Personal Data." Sectors such as integrated circuits, artificial intelligence, life sciences, and pharmaceutical companies (including multinational companies) are particularly targeted. The new draft measures require all network operators' cross-border transfers of personal data to go through a security assessment conducted by a provincial branch of the cyberspace administration. Cross-border data transfer is prohibited if the security assessment concludes such cross-border data transfer is likely to impact national security or the public interest.⁶⁴ The local storage of data "creates gold mine data centers that can be targeted by hackers," and China's regulatory laws in this space seek to establish "absolute control over data generated within its borders."⁶⁵

Secondly, to gain market access in specific sectors, European companies are also required to establish joint ventures in which the companies hold a noncontrolling stake with domestic firms. In some cases, companies have reported being forced to hand over sensitive technology to partners that later became competitors. Such practices have been particularly commonplace in joint ventures with state-owned enterprises as partners, and companies in high-value, cutting-edge sectors were compelled to transfer technology at higher-than-average rates. The EU Chamber of Commerce

63. Lucie Béraud-Sudreau and Meia Nouwens, "Weighing Giants: Taking Stock of the Expansion of China's Defence Industry," *Defence and Peace Economics* 32, no. 2 (June 2019): 151-77.

64. Gil Zhang and Kate Yin, "What You Need to Know about China's New Draft Measures on Cross-Border Data Transfers," International Association of Privacy Professionals (website), August 27, 2019, <https://iapp.org/news/a/what-you-need-to-know-about-chinas-new-draft-measures-on-cross-border-data-transfers/>.

65. Eliza Gkritsi, "China's Data Localization Laws Hurt Cloud Security: Report," TechNode (website), June 12, 2019, <https://technode.com/2019/06/12/chinas-data-localization-laws-have-an-adverse-effect-on-cloud-security-report/>.

in China conducted a survey, the results of which indicated 20 percent of 585 respondents “felt compelled to transfer technology to maintain market access, up from 10% in 2017.”⁶⁶

The transfer of technologies to China from abroad is also conducted in a variety of other ways, including the Chinese government’s institutionalized efforts to attract overseas science and technology talent. Such efforts include the Thousand Talents Program, established in 2008, which recruits high-level overseas scientists and other talents who conduct research in high-tech industries or on frontier technologies to participate in China’s major scientific programs, key laboratories, state-owned enterprises, state-owned financial institutions, or high-tech development zones and industrial parks.⁶⁷ The National High-end Foreign Experts Recruitment Plan led by the Ministry of Science and Technology finances foreign science and technology experts in key priority fields “with the capacity of solving major bottlenecks.”⁶⁸

Similarly, the People’s Liberation Army has sent its own personnel abroad to collaborate with Western research institutes in sensitive areas of technology. In addition to reporting from the United States and Australia of these practices, European institutions have collaborated with PLA researchers.⁶⁹ Recent examples from Denmark and the United Kingdom have highlighted the ongoing nature of these efforts.⁷⁰ These cases highlight cooperation with European universities, such as six collaborative academic studies on quantum optics between the Technical University of Denmark and the PLA Academy of Military Science as well as collaboration on fundamental research in cryptanalysis, quantum computing, optoelectronics, and unmanned aerial vehicles between the Technical University of Denmark and the Chinese National University of Defense Technology.⁷¹ But collaboration has also occurred with PLA-linked researchers without European universities’ awareness.⁷²

Academic collaboration does not, in and of itself, prove technology transfer, but other cases do. For example, before being barred from partnering with the EU’s Galileo project in 2007, the Chinese National Space Administration cooperated closely with the European Space Agency and the space agencies of some individual member states. Some of the data and technological information gained from this collaboration has reportedly been integrated into China’s own BeiDou satellite navigation

66. Julie Wernau, “Forced Tech Transfers Are on the Rise in China, European Firms Say,” *Wall Street Journal* (website), May 20, 2019, <https://www.wsj.com/articles/forced-tech-transfers-are-on-the-rise-in-china-european-firms-say-11558344240>.

67. US-China Economic and Security Review Commission, *2017 Report to Congress of the US-China Economic and Security Review Commission* (Washington, DC: US Government Publishing Office, November 2017).

68. “National High-End Foreign Experts Recruitment Plan (2019 Annual Call),” China Innovation Funding (website), January 30, 2020, <http://chinainnovationfunding.eu/project/2019-high-end-foreign-experts-recruitment-plan/>.

69. Christopher Knaus, “Universities Warn against Defence Plans to Increase Control over Research,” *Guardian* (website), October 29, 2018, <https://www.theguardian.com/australia-news/2018/oct/30/universities-warn-against-defence-plans-to-increase-control-over-research>; and “US Energy Dept Blocks Participation in China’s ‘Thousand Talents’ Program,” *France 24* (website), June 12, 2019, <https://www.france24.com/en/20190612-us-energy-dept-blocks-participation-chinas-thousand-talents-program>.

70. Radomir Tylecote and Robert Clark, *Inadvertently Arming China? The Chinese Military Complex and Its Potential Exploitation of Scientific Research at UK Universities* (London: Civitas, February 2021).

71. Sebastian Stryhn Kjeldtoft, “DTU Collaborates with Researchers from the Chinese Military,” *Politiken* (website), July 1, 2020, https://politiken.dk/udland/int_kina/art7845960/DTU-samarbejder-med-forskere-fra-det-kinesiske-milit%C3%A6r.

72. Sebastian Stryhn Kjeldtoft, “Aalborg Researcher Collaborated with Chinese Military Engineer,” *Politiken* (website), July 7, 2020, https://politiken.dk/udland/int_kina/art7852165/Aalborgforsker-samarbejdede-med-kinesisk-milit%C3%A6ringen%C3%B8r.

system.⁷³ European companies and governments have also played an indirect role in helping China advance toward its quantum capabilities. Launched in 2016, China’s quantum satellite was the result of a cooperative project between Chinese and Austrian researchers led by Austrian Physicist Anton Zeilinger, who failed to secure funding from the European Space Agency and, instead, turned to Chinese quantum physicist Pan Jianwei of the Chinese Academy of Sciences.⁷⁴

No mechanism, no change: Albania, Bulgaria, Croatia, Cyprus, Greece, Iceland, Luxembourg, Slovakia, Turkey	No mechanism, considering change: Belgium (Flanders), Czechia, Denmark, Estonia, Finland, Ireland, the Netherlands, Sweden
Mechanism, no change: Latvia, Lithuania, Montenegro, North Macedonia, Portugal, Romania	Mechanism, updated post-COVID-19: Austria, Canada, France, Germany, Hungary, Italy, Norway, Poland, Spain, United Kingdom, United States New mechanism as of 2020: Slovenia, Malta

Table 1-1. Status of EU and NATO investment screening mechanisms as of 2020

Responses to these practices in Europe have been slow to develop, complicated by the various competencies held by the EU and NATO. Before 2019, only 14 EU member states had screening mechanisms in place to protect domestic innovation and critical industries. Taking its lead from the Committee on Foreign Investment in the United States, in 2019, the EU established a framework for screening foreign direct investment that will “provide a powerful instrument to detect and raise awareness of foreign investment in critical assets, technologies and infrastructure.”⁷⁵ But the EU’s framework still lacks teeth because it is nonbinding; under the framework, the EU can only advise member states on incoming investments. The EU’s investment screening mechanism also does not set clear thresholds to which member states must adhere in their national investment screening mechanisms. In addition, existing member-state mechanisms range in threshold from 5- to 50-percent ownership of a domestic company, and the mechanisms’ risk does not reflect “greenfield” investment or venture capital and other portfolio investments.⁷⁶ See table 1-1 for the status of EU and NATO investment screening mechanisms as of 2020.

As summarized in table 1-1, as of March 2021, the implementation of the EU’s regulations across the EU member states remained patchy. Of the 27 member states, only six have strengthened their investment screening mechanisms as a result of the COVID-19 pandemic. These member states feared, due to the economic downturns caused by COVID-19 disruptions to national economies, Chinese aggressive acquisitions of their companies might undergo an opportunistic rise. By October 2020, six EU member states had still not established any investment screening mechanism at all. This lack of investment screening mechanisms has consequences for NATO as well. Included in the

73. Dan Levin, “Chinese Square Off with Europe in Space,” *New York Times* (website), March 23, 2009, <https://www.nytimes.com/2009/03/23/technology/23iht-galileo23.html>; and David Lague, “SPECIAL REPORT – In Satellite Tech Race, China Hitched a Ride from Europe,” *Reuters* (website), December 22, 2013, <https://www.reuters.com/article/breakout-beidou/special-report-in-satellite-tech-race-china-hitched-a-ride-from-europe-idUSL4N0JJ0J320131222>.

74. Martin Giles, “The Man Turning China into a Quantum Superpower,” *MIT Technology Review* (website), December 19, 2018, <https://www.technologyreview.com/2018/12/19/1571/the-man-turning-china-into-a-quantum-superpower/>; and “China Launches Quantum-Enabled Satellite Micius,” *BBC News* (website), August 16, 2016, <https://www.bbc.co.uk/news/world-asia-china-37091833>.

75. Mogherini, *EU-China*.

76. Mogherini, *EU-China*.

countries that do not have any mechanisms in place are NATO allies such as Albania, Bulgaria, Croatia, Greece, Iceland, Luxembourg, Slovakia, and Turkey.

China's ongoing access to European academic institutions and private sector companies at the forefront of dual-use technology innovation, coupled with the lack of common investment screening mechanisms across EU member states and NATO allies, will leave the door open for Chinese stakeholders to continue leveraging European innovation. The overt and direct link with PLA personnel and institutions in the aforementioned cases signals technology transfer from Europe (whether from EU countries or NATO countries) in key dual-use technologies will continue to contribute to the People's Liberation Army's ongoing development of cutting-edge, emerging technologies.

Section 2 Key Findings

The key findings about technology transfers include the following.

- Western European countries export more military equipment than Eastern European countries do because the former has larger domestic defense industries.
- A general downward trend in arms transfers to China is too early to confirm, but, given China's rise in conventional military production capacity, the effects of a downward trend would be rather limited for the People's Liberation Army.
- China has leveraged European innovation in dual-use, emerging and frontier technologies for military purposes in both China and Europe and will continue to do so.
- Despite EU regulations, European countries in the EU and NATO still lack a truly common approach to investment screening that protects indigenous innovation and critical technologies.

Conclusion: Continuity or Change?

The PLA relationship with Europe across the EU and NATO has been overestimated in some areas and underestimated in others. Overall, however, although the PLA relationship with Europe has provided the Chinese military with both kit and capabilities in the past, this relationship is unlikely to be the most useful to the People's Liberation Army in the future.

Although the People's Liberation Army has pursued military-to-military relations with Western militaries—and increasingly so with Belarus and Serbia—no discernible pattern can be seen that indicates a shift in PLA focus from the west of Europe to the east. Bilateral engagement with European militaries has decreased slightly in the past couple years, though, in 2020, this decrease was most likely caused by COVID-19. Thus, European militaries continue to cooperate with the People's Liberation Army in limited port calls, defense diplomacy, and joint exercises in MOOTW. The PLA relationship with the EU and NATO has also mainly taken place at the political level.

Practical military cooperation has extended to anti-piracy operations and limited academic exchanges with the NATO Defense College. Documentation of the former type of engagement underlines the practical value to the People's Liberation Army's learning and blue-water naval capabilities. Nevertheless, geopolitical shifts have affected these institutions' views of the People's Liberation Army. As a result, the cooperation and exchanges are unlikely to continue far into the future.

In terms of military-related technology transfers, our research has shown a decline for some countries, such as the United Kingdom and Germany, in conventional technology transfer to China. Nevertheless, Czechia and France show the opposite trend and continue to transfer conventional military technologies to China. Whether current geopolitical trends will impact conventional technology transfers remains to be seen because, as of March 2021, when this chapter was written, the Stockholm International Peace Research Institute and European External Action Service data sets had only been updated through 2019 and 2018, respectively. Thus, any limiting impact on military technology transfer from 2019 onward will only become clear in the coming years. But the evidence indicates the opposite is true for emerging, dual-use technology transfer. European academic institutions and companies have contributed to military-relevant, dual-use technologies and innovation in both Europe and China. The Chinese government-mandated policies that result in technology transfer practices in China are unlikely to change in the near future. In Europe, although EU member states and NATO have become more clear-eyed to practices of technology transfer in their respective countries via mergers and acquisitions or academic collaboration, regulatory practices in Europe vary widely from country to country. The lack of a unified, common, investment screening mechanism, for instance, will provide the People's Liberation Army with the opportunity to continue to leverage European technology in these areas.

In both military-to-military engagement and conventional technology transfer, if Europeans were to fully stop cooperating with the People's Liberation Army, consequences for the People's Liberation Army would likely be limited because the interactions are only occurring on a limited scale. But a more proactive and common EU (and NATO) response to emerging, dual-use technology transfer would have a larger impact and potentially force the People's Liberation Army to acquire these capabilities elsewhere.

To clarify the trends of military-to-military cooperation, further research is needed to collect more comprehensive information on the exchange of military officers between European and Chinese military academies and institutions. Similarly, on the topic of China's access to military-relevant, emerging, technological innovation abroad, further research should be performed that focuses on China's investment in European start-ups because these investments will likely not meet the thresholds that trigger European investment screening regulations.

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“Only with Deep Roots Can a Tree Yield Rich Fruit:” The People’s Liberation Army in Africa

Paul Nantulya

Introduction

This chapter examines the People’s Liberation Army’s (PLA’s) relationships in Africa and how China builds networks and social capital to provide a richer background for the PLA’s involvement in Africa, which is mostly focused on its military base in Djibouti. During Africa’s independence struggles, the People’s Liberation Army provided military skills and training in leadership and command to soldiers of the African anticolonial and antiapartheid movements and also diffused Chinese military doctrine and political ideology to guide the development of these soldiers.¹ The intimate relationships China built with the soldiers allowed it to cultivate significant social capital with each generation of political and military leaders since the 1950s, and this social capital helped to position the People’s Liberation Army as a trusted and enduring partner.

Currently, China is employing the People’s Liberation Army in more complex roles. On numerous occasions, senior PLA leaders have said “the boundaries of China’s national security” are defined by its expanding global interests, and “where national interests expand, the support of the military force has to follow.”²

The People’s Liberation Army must therefore increase its ability to operate beyond China’s periphery as “overseas interests have become an integral component of China’s national interests.”³ China’s latest white paper on defense, titled “China’s National Defense in the New Era,” calls for “all-dimensional,” “wide-ranging,” and “multi-tiered” military relationships. China views these relationships as the key to building “new model security partnerships” of “mutual trust and win-win cooperation,” without which Chinese aims cannot be fulfilled.⁴

1. Paul Nantulya, “China Promotes Its Party-Army Model in Africa,” *Spotlight* (blog), July 28, 2020, <https://africacenter.org/spotlight/china-promotes-its-party-army-model-in-africa/>.

2. Nadège Rolland, “Securing the Belt and Road: Prospects for Chinese Military Engagement along the Silk Roads,” in *Securing the Belt and Road Initiative: China’s Evolving Military Engagement along the Silk Roads*, ed. Nadège Rolland (Seattle: National Bureau of Asian Research, September 2019), 1–6.

3. State Council Information Office of the People’s Republic of China (PRC), “The Diversified Employment of China’s Armed Forces” (white paper, State Council Information Office of the PRC, April 16, 2013), <http://en.people.cn/90786/8209362.html>.

4. State Council Information Office of the PRC, “China’s National Defense in the New Era” (white paper, State Council Information Office of the PRC, July 2019), <https://english.www.gov.cn/atts/stream/files/5d3943eec6d0a15c923d2036>.

China's military owes its loyalty to the Chinese Communist Party (CCP), not the state or government. Accordingly, China's foreign interactions are handled by the CCP's Central Military Commission (CMC), a supreme party organ chaired by Xi Jinping. The party's Central Military Commission has more authority than the state Central Military Commission, a parallel organization with identical membership that makes all decisions on military matters in name only.⁵ Secondly, China's military relationships are not limited to military establishments. The PLA leadership is entirely controlled by the ruling party, with commanders and political officers serving as coequals. As such, China's soldiers see themselves as political cadres and, hence, pay close attention to building intricate ties with ruling political parties abroad, especially liberation movements.

China's approach to building defense ties differs markedly from the approaches used by Western countries (such as the United States), which focus purely on the military. To illustrate, the CMC Political Work Department is at the same level as other departments in the PLA's top structure, such as those handling logistics, equipment, and training.⁶ Political networking and political work are the tip of the spear for cultivating networks with African militaries and other militaries in the developing world. All military activities, from joint exercises and training to host-nation security, are coordinated closely with other party organs, such as the Chinese People's Association for Friendship with Foreign Countries and the International Department of the Chinese Communist Party's Central Committee.

This chapter is built on three assumptions. First, China's ability to operate effectively overseas depends to a large extent on the quality and depth of its foreign relationships on multiple levels, both political and military. Second, China's position as a partner of choice for African countries stems from how well these relationships are forged and replenished. Third, partners' receptiveness to the Chinese experience and models is key to China's ability to generate influence.

The chapter, which is organized into three parts, takes a retrospective look at how the PLA's relationship building has evolved and what it entails. Next, the chapter examines the countries with which the People's Liberation Army is most committed to developing relationships. Case studies highlight variations across a taxonomy of countries as a framework for analysis. Finally, the chapter discusses Chinese military training and professional military education (PME) as instruments of relationship building, paying attention to the synthesis of old and new models of engagement and how they are received by African audiences. The chapter concludes by considering how the PLA's relationship building might evolve in the future.

5. Susan V. Lawrence, *China's Political Institutions and Leaders in Charts*, R43303 (Washington, DC: Congressional Research Service, November 12, 2013).

6. Phillip C. Saunders et al., eds., *Chairman Xi Remakes the PLA: Assessing Chinese Military Reforms* (Washington, DC: National Defense University Press, 2019), 6–7.

Engagement with Chinese Characteristics: The PLA Approach to Partnership

The People's Liberation Army has always been deployed in line with the CCP's Political Work Guidelines of the People's Liberation Army, which include giving "full play to the combat function of political work," such as "organiz[ing] public opinion warfare, psychological warfare, and legal warfare."⁷

The PLA's deep immersion into politics has socialized its leaders to emphasize nonmilitary activities, such as PME, political and military dialogues, party-to-party ties, and military diplomacy, that amplify China's soft power, often in close coordination with party organs.⁸ These lines of effort meant the People's Liberation Army traditionally maintained a light military footprint and placed greater emphasis on building the necessary political relationships.⁹ These practices were evident in Africa, where the People's Liberation Army deployed small teams of guerilla warfare instructors in countries like Algeria, Congo (Brazzaville), Egypt, Ghana, Guinea-Bissau, Tanzania, Zaire (now the Democratic Republic of the Congo), and Zambia.¹⁰ The People's Liberation Army also regularly deployed small civilian and military Chinese medical teams on rotation to different countries.¹¹

This light footprint contrasted sharply with the large Soviet and Cuban deployments during this period. Cuban deployments in Africa numbered roughly 337,000 by 1986.¹² Currently, China has only one military base in Africa; by contrast, the United States maintains numerous military facilities in Africa, including several "enduring locations" and many smaller "contingency locations."¹³ The United States also conducts around six major, multinational African military exercises annually.¹⁴ The largest drill, African Lion, brings together at least 8,000 African troops.¹⁵ The 2021 edition—

7. Peter Mattis, "China's 'Three Warfares' in Perspective," War on the Rocks (website), January 30, 2018, <https://warontherocks.com/2018/01/chinas-three-warfares-perspective/>.

8. Robert G. Sutter and Chin-Hao Huang, "Military Diplomacy and China's Soft Power," *Comparative Connections* 8, no. 2 (July 2006).

9. Christopher D. Yung and Ross Rustici, "*Not an Idea We Have to Shun*": Chinese Overseas Basing Requirements in the 21st Century, China Strategic Perspectives 7 (Washington, DC: Institute for National Strategic Studies, National Defense University Press, October 2014).

10. Joshua Eisenman, "Comrades-in-Arms: The Chinese Communist Party's Relations with African Political Organisations in the Mao Era, 1949–76," *Cold War History* 18, no. 4 (2018); and Lena Dallywater, Chris Saunders, and Helder Adegas Fonseca, ed., *Southern African Liberation Movements and the Global Cold War 'East': Transnational Activism 1960–1990* (Berlin: De Gruyter Oldenbourg, 2019).

11. Paul Nantulya, "China's Role in COVID-19 in Africa: Tuánjié (Solidarity) or Zhànlüè (Strategy)?" The African Centre for the Constructive Resolution of Disputes (website), September 8, 2021, <https://www.accord.org.za/analysis/chinas-role-in-covid-19-in-africa-tuanjie-solidarity-or-zhanlue-strategy/>.

12. Jamie Miller, "Castro in Africa: The Contradictions of Exporting Revolution," *Atlantic* (website), December 3, 2016, <https://www.theatlantic.com/international/archive/2016/12/castro-south-africa-angola/509243/>.

13. Nick Turse, "Exclusive: The US Military's Plans to Cement Its Network of African Bases," *Mail and Guardian* (website), May 1, 2020, <https://mg.co.za/article/2020-05-01-exclusive-the-us-militarys-plans-to-cement-its-network-of-african-bases/>.

14. Turse, "The US Military's Plans."

15. "Exercises," United States Africa Command (website), accessed on April 3, 2021, <https://www.africom.mil/what-we-do/exercises>.

the 17th since 2004—featured 7,800 troops.¹⁶ By contrast, China started exercising with African partners when it deployed its 16th PLA Navy (PLAN) escort task force off the Somali coast in 2014.¹⁷ The People’s Liberation Army conducted naval drills that lasted three to four days with the Cameroonian and Namibian navies and a month-long exercise with the Tanzanian marines that consisted of 100 troops from both countries. Eventually, the tradition was established whereby military drills were combined with anti-piracy patrols and port visits, military diplomacy, and party-to-party and diplomatic events.¹⁸

The PLA Navy’s exercises with the Cameroonian, Ghanaian, and Nigerian navies in 2018 were coordinated with the deployments of the former’s 27th and 28th escort task forces. Notably, the exercises coincided with the latter nations signing onto the Belt and Road Initiative.¹⁹

The PLA’s largest exercises so far were conducted in November 2019 with the Russian and South African navies off the Cape Town coast and in December of the same year with the Tanzanian military. The former exercises lasted five days and featured advanced platforms like the PLA’s guided missile frigate *Weifang*, the Russian missile cruiser *Marshal Ustinov*, and the South African frigate SAS *Amatola*.²⁰ The Tanzanian drills lasted 25 days and involved over 300 Chinese and Tanzanian troops.²¹ In addition, unlike the West, China lacks an enduring military presence overseas. United States Africa Command has eight security cooperation programs delivered year-round to various African countries.²² The British Army runs extensive programs—for example, the British Military Advisory and Training Team (South Africa) and the British Peace Support Training Team (Africa).²³ The British Army Training Unit Kenya (BATUK) is a permanent facility that spans hundreds of thousands of hectares across 13 sites in the desert-like region of Nanyuki.²⁴

16. United States Africa Command Public Affairs, “African Lion 21 Exercise Begins with 7,800 Troops in Morocco, Tunisia, Senegal,” press release no. 33798, June 7, 2021, <https://www.africom.mil/pressrelease/33798/african-lion-21-exercise-begins-with-7800-troops-in-morocco-tunisia-senegal>.

17. Chinanews.com, “China-Cameroon Navies Conduct ‘Anti-Piracy’ Exercises,” *People’s Daily* Online (website), June 4, 2014, <http://en.people.cn/n/2014/0604/c90786-8736605.html>; Indo-Asian News Service, “China, Namibia Hold Joint Naval Drills,” Firstpost (website), June 11, 2014, <https://www.firstpost.com/fwire/china-namibia-hold-joint-naval-drills-1565009.html>; and “The First Joint Training Exercise between the Two Armed Forces of Tanzania and China to Be Conducted,” Embassy of the PRC in the Republic of Tanzania (website), October 22, 2014, <https://www.mfa.gov.cn/ce/cetz/eng/sgdt/t1202773.htm>.

18. Paul Nantulya, “Chinese Hard Power Supports Its Growing Strategic Interests in Africa,” *Spotlight* (blog), January 17, 2019, <https://africacenter.org/spotlight/chinese-hard-power-supports-its-growing-strategic-interests-in-africa/>.

19. Nantulya, “Chinese Hard Power.”

20. Ankit Panda, “Chinese, Russian, South African Navies Conduct Trilateral Naval Exercises,” *Diplomat* (website), November 27, 2019, <https://thediplomat.com/2019/11/chinese-russian-south-african-navies-conduct-trilateral-naval-exercises/>; and Huang Panyue, “China-Tanzania ‘Sincere Partners-2019’ Military Training Kicks Off in Tanzania,” China Military Online (website), December 30, 2020, http://eng.chinamil.com.cn/view/2019-12/30/content_9706488.htm.

21. Panda, “Navies Conduct.”

22. “What We Do,” United States Africa Command (website), n.d., <https://www.africom.mil/what-we-do>.

23. “Deployments: Africa,” British Army (website), n.d., <https://www.army.mod.uk/deployments/africa/>.

24. Ministry of Defence and Defence Infrastructure Organisation, “The Defence Training Estate,” Gov.uk (website), updated October 22, 2019, <https://www.gov.uk/guidance/defence-infrastructure-organisation-and-the-defence-training-estate>; and David Graham, “Increasing Training Capabilities for the British Army Training Unit Kenya,” *Inside DIO* (blog), March 3, 2021, <https://insidedio.blog.gov.uk/2021/03/03/increasing-training-capabilities-for-the-british-army-training-unit-kenya/>.

British soldiers conduct massive, live-fire exercises several times a year involving whole battle groups consisting of 15,000 troops and artillery, tanks, infantry, engineers, and intelligence to prepare for deployment to Afghanistan, Iraq, and elsewhere.²⁵ In a documentary televised on December 10, 2015, the then-BATUK Commander Colonel Tom Vallings said British forces do not have a comparable place in the United Kingdom to train on such a scale.²⁶ As benefit to its host, the BATUK incorporates Kenyan forces into its training regimen and prepares them for deployment to Somalia.²⁷ China has no exercise of this magnitude anywhere in Africa or globally.²⁸

The PLA logistics base in Djibouti spans 36 hectares, a paltry size compared to that of the BATUK.²⁹ In 2017, the People's Liberation Army conducted its first and, so far, only live-fire exercise on this base since its establishment in 2016. Around Africa, roughly 2,458 Chinese peacekeepers serve in eight UN missions.³⁰ Since 2008, the People's Liberation Army has continuously deployed naval units on international anti-piracy missions in the Gulf of Aden.³¹

Aside from these operations, small PLA teams train partners on the use and maintenance of Chinese weaponry.³² Troops of the People's Liberation Army also deploy as part of the Chinese Medical Teams stationed around Africa on one- to two-year tours.³³ Meanwhile, China has only one known team of educators at the Zimbabwe Staff College in Harare.³⁴ By contrast, Western countries run vast PME programs in Africa. For instance, the US government's Africa Center for Strategic Studies delivers PME packages to over 50 African countries annually.³⁵ These comparisons demonstrate a complete assessment of China's growing military influence in Africa cannot be based solely on counting bases, troops, and exercises; rather, assessments should be based on an examination of China's unique approach to building trust.

A key point about China's approach to building trust is the People's Liberation Army's engagements are heavily oriented toward generating political "soft power" [软实力] and diffusing

25. Jeff Koinange, *Sunday Live: Friends in Force – Jeff Koinange* (Nairobi: Citizen TV, June 28, 2021), YouTube video, https://www.youtube.com/watch?v=ffvTx8r_-s.

26. *BBC News*, "Inside British Army Training Mission in Kenya – BBC News" (London: *BBC News*, December 10, 2015), YouTube video, <https://www.youtube.com/watch?v=B9MasGFTqi8>.

27. Koinange, *Sunday Live*.

28. Kristin Huang, "Size of China's Navy May Be Closing Gap on US Fleet but What Can the PLA Do with Just One Overseas Naval Base?," *South China Morning Post* (website), March 14, 2021, <https://www.scmp.com/news/china/military/article/3125171/size-chinas-navy-may-be-closing-gap-us-fleet-what-can-pla-do>.

29. Minnie Chan, "Live-Fire Show of Force by Troops from China's First Overseas Military Base," *South China Morning Post* (website), September 25, 2017, <https://www.scmp.com/news/china/diplomacy-defence/article/2112780/live-fire-show-force-troops-chinas-first-overseas>.

30. Steven Kuo, "China's Approach to Peace in Africa Is Different. How and Why," *Conversation* (website), January 27, 2020, <https://theconversation.com/chinas-approach-to-peace-in-africa-is-different-how-and-why-129467>.

31. Andrew S. Erickson and Austin M. Strange, "China's Blue Soft Power: Antipiracy, Engagement and Image Enhancement," *Naval War College Review* 68, no. 1 (Winter 2015).

32. Tom Bayes, *China's Growing Security Role in Africa: Views from West Africa, Implications for Europe* (Berlin: Konrad Adenauer Stiftung, 2020).

33. Nantulya, "China's Role in COVID-19."

34. Nesia Mhaka and Wellington Dengu, "JUST IN: Government Applauds Chinese Defense Forces," *Herald* (website), November 15, 2019, <https://www.herald.co.zw/just-in-govt-applauds-chinese-defence-forces/>.

35. Michael J. McNerney et al., *Defense Institution Building in Africa: An Assessment* (Santa Monica, CA: RAND Corporation, 2016).

norms, not hard power per se. Though this statement is a contradiction in terms when viewed from Western lenses, the statement is consistent with Chinese cultural and intellectual conceptions of power and influence.³⁶ During its formative years in Africa, the People's Liberation Army worked closely with the Chinese Communist Party to cultivate Africa's young revolutionaries and train them in combat operations, politics, and ideology.³⁷

Instructors in the People's Liberation Army imparted military skills, while political commissars [政治委员 政委] conducted political and ideological education.³⁸ African fighters started arriving in China in the 1950s, not long after the People's Republic of China was established. The Foreign Training Department of Military College in Beijing developed mid- and high-level staff and commanding officers to prepare African soldiers for service in their respective national liberation movements. (This institution has existed in different forms: the 4th Department of Military College [Nanjing], 4th Department of Higher Military College [Beijing], Foreign Training Department of Military College [Beijing], and Foreign Training Department of the College for Defense Studies [Beijing].)³⁹ This school is now the International College of Defence Studies, which continues to be a popular destination for African military professionals, as one can see on the college's website.⁴⁰

Apart from political work, ideology, and command and staff, African guerillas were also trained in technical subjects like geography, map reading, communications, and engineering.⁴¹ In addition, those with political skills attended political schools, such as Nanjing Higher Military-Political Academy, where they trained to become political officers.⁴²

China also conducted extensive political outreach. Between 1958 and 1964, 144 Chinese delegations visited Africa and received 405 African ones in return.⁴³ The exchanges were managed by numerous front organizations, such as the Cairo-based Afro-Asian People's Solidarity Organisation, Afro-Asian Writer's Conference, and All-China Youth Federation, all of which funneled weapons and provided other forms of assistance.⁴⁴

China's steadfast support for African independence paid huge political dividends. By 1964, 15 of 35 independent African countries chose to recognize Beijing, rather than Taipei—an increase

36. Paul Nantulya, "Strategic Application of the Tao 道 of Soft Power: The Key to Understanding China's Expanding Influence in Africa," *African Review* 47 (2020): 1–49.

37. Mohamed A. El-Khawas, "China's Changing Policies in Africa," *A Journal of Opinion* 3, no. 1 (1973): 24–28.

38. Bruce Larkin, *China and Africa, 1949–1970: The Foreign Policy of the People's Republic of China* (Berkeley, CA: University of California Press, 1971), 31–35.

39. "ICDS Overview," International College of Defence Studies (website), n.d., <http://www.cdsndu.org/en/index.php/lsyg.html>.

40. "ICDS Overview."

41. Paul Nantulya, "China's Strategic Aims in Africa" (testimony, *China's Strategic Aims in Africa, Before the US-China Economic and Security Review Commission*, May 20, 2020).

42. Helder Adegas Fonseca, "The Military Training of Angolan Guerrillas in Socialist Countries: A Prosopographical Approach, 1961–1974," in Dallywater, Saunders, and Fonseca, *Southern African Liberation Movements*, 103–28.

43. Eisenman, "Comrades-in-Arms," 429–45.

44. Eisenman, "Comrades-in-Arms."

of eight from 1960.⁴⁵ Today, only one African country, Eswatini, has relations with Taiwan.⁴⁶ China played the long game, always aware of how party-to-party relations, inexpensive investments in training, and small and targeted deployments could increase its competitive edge against Cuba, which made far greater military commitments and sacrifices.

China also skillfully seized political opportunities to position itself as a reliable partner. For instance, China was one of the most important sources of weaponry, finance, and military instructors for the Organization of African Unity (the predecessor to the African Union) and its Liberation Committee, based in Tanzania, which was tasked with mobilizing military assistance for the liberation movements and financial aid for countries willing to host the movements.⁴⁷

China also built social goodwill by supporting economic projects to enhance the liberation war effort. For example, China funded and built the 1,870-kilometer Tan-Zam Railway (commonly referred to as “TAZARA” as well as “Uhuru,” which means “freedom” in Swahili) to provide landlocked Zambia access to the Indian Ocean via Dar es Salaam.⁴⁸ This project—one of China’s largest and most expensive in Africa—sought to reduce the dependence of the Frontline States of Southern Africa on the economic infrastructure of apartheid South Africa and minority-ruled Zimbabwe (Rhodesia).⁴⁹ The railway was built by the People’s Liberation Army’s Railway Engineering Corps with a workforce of around 30,000–40,000 Chinese and about twice that number of Africans.⁵⁰ The Africans were recruited from the Tanzanian and Zambian youth leagues and the Tanzanian military’s National Youth Service. Such well-timed political projects meant China did not need to mimic the massive Cuban and Soviet deployments to curry favor with African elites. China gained long-term political mileage by closely aligning its policies with pressing African priorities with minimal use of military power. In similar fashion, Chinese strategists today appear to believe they do not need to match the expansive military activities of the United States, France, or the United Kingdom to generate the kind of strategic influence the Chinese are seeking in Africa.

45. Eisenman, “Comrades-in-Arms.”

46. Peter Fabricius, “Taiwan Has Lost All Its Friends in Africa – Except eSwatini,” *ISS Today* (blog), May 31, 2018, <https://issafrica.org/iss-today/taiwan-has-lost-all-its-friends-in-africa-except-eswatini>.

47. Hilmi S. Yousuf, “The OAU and the African Liberation Movement,” *Pakistan Horizon* 38, no. 4 (1985): 55–67.

48. Hilal K. Sued, comp., “TAZARA: How the Great Uhuru Railway Was Built,” Embassy of the PRC in the Republic of Tanzania (website), April 11, 2012, http://tz.china-embassy.org/eng/sgdt/201204/t20120411_6066204.htm.

49. Salim Ahmed Salim, “The Building of TAZARA and the Restoration of China’s Legitimate Seats in the UN,” in *A Monument to China-Africa Friendship: Firsthand Account of the Building of the TAZARA*, comp. Ministry of Foreign Affairs Department of Policy Planning (Beijing: World Affairs Press, 2015); and Eric Olander, “The Future of the Tanzam Railway,” China-Africa Project (website), July 12, 2010, <https://chinaafricaproject.com/podcasts/podcast-china-africa-tanzam-tazara-railway-zambia-tanzania-henry-hall/>.

50. Jamie Monson, “Making Men, Making History: Remembering Railway Work in Cold War Afro-Asian Solidarity,” *Clio* 38 (2013).

Dynamics of PLA Encounters with Africa in the Postliberation Era

During the transition from Mao Zedong to Deng Xiaoping, China turned its attention to “reform and opening up” [改革开放] and attracting Western foreign direct investment and abandoned its agenda of third-world revolutionary solidarity, thereby relegating Africa to the margins of its foreign policy.⁵¹ This change did not last long, however. China’s rapprochement with Western powers soured over the PLA’s handling of the Tiananmen Square student protests of April 1989.

Most of the Western powers imposed economic and trade sanctions and visa restrictions on China, including a stoppage of high-level visits and arms embargoes.⁵² Meanwhile, the Soviet Union and Eastern communist republics had been swept away by popular protests that had been aided by the West, adding to China’s sense of vulnerability and isolation.⁵³ Deng Xiaoping captured the mood in Beijing when he said, “There are many people in the world who hope we will develop but there are also many who are out to get us.”⁵⁴ African leaders exploited this situation by offering China solidarity in exchange for its return to Africa. The strategy worked: Chinese foreign minister Qian Qichen toured 14 Southern African countries between July 1989 and June 1992 to drum up support. During this tour, Qian offered expanded diplomatic partnerships and economic aid. Chinese foreign aid spiked between 1988 and 1990 from \$60 billion to \$376 billion. Twenty-four out of the 51 recipients were African.⁵⁵

China’s strategic reengagement with Africa and the developing world occurred in this larger political context, as the following statement from the Chinese government demonstrates:

In the past, China’s relations with Western countries have been overheated, giving a cold-shoulder to the Third World countries and old friends, meaning Africa. Judging from the events in this turmoil, it seems that at a critical moment it was still those old friends who gave China the necessary sympathy and support. Therefore, from now on, China will put more efforts in developing relations with these old friends.⁵⁶

China’s revamped policy toward Africa had three main features. First, China expanded its outreach to include countries with weak or nonexistent ties to the Chinese Communist Party. Second, African countries were integrated into China’s global priorities, such as the

51. Phillip Carter III, Raymond Gilpin, and Paul Nantulya, “China in Africa: Opportunities, Challenges, and Options,” in *China’s Global Influence: Perspectives and Recommendations*, ed. Scott D. McDonald and Michael C. Burgoyne (Honolulu: Daniel K. Inouye Asia-Pacific Center for Security Studies, September 2019).

52. Richard C. Bush, “30 Years After Tiananmen Square, a Look Back on Congress’ Forceful Response,” *Order from Chaos* (blog), May 29, 2019, <https://www.brookings.edu/blog/order-from-chaos/2019/05/29/30-years-after-tiananmen-square-a-look-back-on-congress-forceful-response/>.

53. Ian Taylor, “China’s Foreign Policy towards Africa in the 1990s,” *Journal of Modern African Studies* 36, no. 3 (September 1998): 443–60.

54. Taylor, “China’s Foreign Policy.”

55. Taylor, “China’s Foreign Policy.”

56. Taylor, “China’s Foreign Policy.”

“Go Out” policy [出去战略] that facilitated the outward expansion of Chinese state-owned firms to new markets in the global south and, more recently, the Belt and Road Initiative.⁵⁷ Third, China responded to African requests to establish a mechanism for engagement—namely, the Forum on China-Africa Cooperation, the first and largest of China’s regional, multilateral forums. On the military side, however, China still preferred to work with former national liberation movements because they provided the country the familiarity, predictability, and stability it needed to pursue wide-ranging military cooperation.⁵⁸

Indeed, all countries ruled by liberation movements are among the 25 nations that enjoy strategic partnership relations with China.⁵⁹ Botswana is the only member of the Former Liberation Movements of Southern Africa that does not. This organization includes the ruling parties of Angola, Botswana, Mozambique, Namibia, South Africa, Tanzania, Zambia, and Zimbabwe. (The Botswana Democratic Party first took part in Former Liberation Movements of Southern Africa summits in 2009.)⁶⁰

But the People’s Liberation Army also cultivates militaries that had not been exposed to revolutionary politics—particularly, militaries with strong ties to the West—as part of a competitive strategy to position itself as a partner of choice.⁶¹ Finally, China has deepened its military ties to countries that occupy strategic locations along the Belt and Road, regardless of their political systems.

China has a system by which it ranks countries according to their strategic importance. From the highest to lowest, the categories in Africa (according to official statements) are: “Comprehensive Strategic Cooperative Partnership” (全面战略合作夥伴關係), “Comprehensive Strategic Partnership” [全面战略伙伴关系], “Strategic Partnership” [战略伙伴关系], “Friendly Cooperative Partner Relations” [友好合作伙伴关系], and “Nonstrategic Partnership” [非战略伙伴关系]. How countries end up in one category as opposed to another is unclear. (No single document clearly spells out these classifications or the criteria China uses to distinguish one from another. But the record of Chinese press statements shows the 25 African countries China includes in its partnership diplomacy fall into the five categories discussed.)⁶² Feng Zhongpin and Huang Jin suggest these categories are vague because China has sophisticated partnerships with countries it has not included

57. Carter, Gilpin, and Nantulya, “China in Africa,” 105–12.

58. Paul Nantulya, *China’s Military Power Projection and US National Interests* (testimony, *China’s Military Power Projection and US National Interests, Before the US-China Economic and Security Review Commission*, February 20, 2020).

59. State Council Information Office of the PRC, “China and Africa in the New Era: A Partnership of Equals” (white paper, State Council Information Office of the PRC, November 26, 2021).

60. Joseph Madzimure, “200 Delegates for Liberation Movements Meet,” *Herald* (website), September 3, 2019, <https://www.herald.co.zw/200-delegates-for-liberation-movements-meet/>.

61. Nantulya, “China’s Strategic Aims.”

62. David Cowhig, “China’s Diplomacy: How Many Kinds of Major and Minor Partner ‘Relations’ 夥伴關係 Does China Have?,” *David Cowhig’s Translation Blog*, February 4, 2021, <https://gaodawei.wordpress.com/2021/02/04/chinas-diplomacy-how-many-kinds-of-major-and-minor-partner-relations-%E5%A4%A5%E4%BC%B4%E9%97%9C%E4%BF%82-does-china-have/>.

in its partnership criteria.⁶³ But a 2019 report by Quan Li and Min Ye, one of the few empirical studies on China's partnership diplomacy, found Beijing's partnership strategy is shaped by the need to counter US influence and expand China's multilateral profile and the desire to build support for long-range goals, such as restoring China as a great power [世界强国].⁶⁴

Patterns of Engagement in Select Countries

Taking these differences into account, the next section discusses the patterns of Chinese military engagement across a representative sample of countries: Algeria, Botswana, Egypt, Kenya, and Tanzania. These countries' partnerships with China vary according to their historical ties to the People's Liberation Army, regional differences, US and Western ties, and relevance to larger Chinese objectives.

Kenya

Relations between Kenya and China were initially lukewarm and remained at the *chargé d'affaires* level until the late 1980s. The first PLA delegation, headed by General Liu Jingsong, commander of the Lanzhou Military Region, visited Kenya in December 1996 to explore defense cooperation.⁶⁵ This visit was part of a strategic dialogue between President Daniel arap Moi and General Secretary (and President) Jiang Zemin.⁶⁶ The Kenyan side visited China in 1997, led by the Chief of General Staff Daudi Tonje and accompanied by Major General Nick Leshan, commander of the Kenya Air Force.

These early engagements mainly centered on Kenya's desire to diversify its sources of weaponry. Indeed, shortly after the return visit, Kenya received a batch of six 17-seater Y-12 aircraft manufactured by Harbin Aircraft Manufacturing Corporation.⁶⁷ By 2001, military exchanges and training between the People's Liberation Army and the Kenya Defence Forces had become regular, with a growing number of officers training at the PLA National Defense University.⁶⁸ Between 2000 and 2018, more than 50 percent of Kenya's arms were supplied by China.⁶⁹

63. Feng Zhongping and Huang Jing, "China's Strategic Partnership Diplomacy: Engaging with a Changing World" Working Paper no. 8 (Fundación para las Relaciones Internacionales y el Diálogo Exterior, Madrid, June 2014), https://www.files.ethz.ch/isn/181324/China%E2%80%99s%20strategic%20partnership%20diplomacy_%20engaging%20with%20a%20changing%20world%20.pdf.

64. Quan Li and Min Ye, "China's Emerging Partnership Network: What, Who, Where, When and Why," *International Trade, Politics, and Development* 3, issue 2 (2019): 66–81.

65. Ministry of Foreign Affairs, "Bilateral Relations between China and Kenya," Embassy of the PRC in the Republic of Kenya (website), accessed on April 2, 2021, <http://ke.china-embassy.org/eng/sbgx/t169682.htm>.

66. Ministry of Foreign Affairs, "Bilateral Relations."

67. Donovan C. Chau, *Political Warfare in Sub-Saharan Africa: US Capabilities and Chinese Operations in Ethiopia, Kenya, Nigeria, and South Africa* (Carlisle, PA: Strategic Studies Institute, US Army War College Press, March 2007).

68. Radomir Tylecote and Henri Rossano, "China's Military Education and Commonwealth Countries" (discussion paper, Civitas, London, November 2021), <https://www.civitas.org.uk/content/files/China-training.pdf>.

69. Cullen S. Hendrix, "Arms and Influence? Chinese Arms Transfers to Africa in Context," *Realtime Economic Issues Watch* (blog), July 15, 2020, <https://www.piie.com/blogs/realtime-economic-issues-watch/arms-and-influence-chinese-arms-transfers-africa-context>.

China's expanded engagements in Kenya developed against the backdrop of strained relations between the Moi administration and Western countries over human-rights concerns.⁷⁰ Moi's ruling Kenya African National Union courted China as an alternative. Notable political exchanges were led by Qian Zhengying, the vice chairperson of the Chinese People's Political Consultative Conference in June 1997; Li Peng, the chairman of the National People's Congress, and his deputy, Peng Peiyun, in November 1999; Dai Bingguo, minister of the CCP International Liaison Department in April 2000; and Wang Zhongyu, secretary general of the State Council in May 2000.⁷¹ These interactions focused on strengthening ties between the Kenya African National Union and the Chinese Communist Party and exchanging ideas on managing the state, the relationship between the party and the military, cadre development, and industrialization.

The military exchanges from this period until 2008 were headed by General Li Jinai, political commissar of the Equipment Development Department; General Fu Quanyou, chief of the General Staff (later renamed the CMC Joint Staff Department); directors and deputies of the General Logistics Department (later renamed the CMC Logistic Support Department); commanders of various military regions; and the defense minister.⁷²

The norms that were exchanged during these visits are unknown, but the two sides achieved key political objectives: China gained a foothold in a country considered to be one of the staunchest Western allies in Africa, and Kenya played China and its Western partners off each other to broaden its strategic options, a form of African agency vis-à-vis China and other world powers.

President Uhuru Kenyatta spent most of his first term in office (2013–17) strengthening ties with China as part of his so-called “Look East” policy. Kenyatta felt disrespected by Western partners when they backed an International Criminal Court indictment against him and his deputy William Ruto for inciting violence during the 2007 elections.⁷³ Senior CCP leaders attended the launch of Kenyatta's reconfigured Jubilee Party at the State House grounds on September 7, 2016.⁷⁴ Two weeks later, 50 Jubilee leaders traveled to China for training on managing a new political party. In 2017, the two sides started an ambitious program to build Jubilee structures from the national to county and municipal levels, backed by a team of 300 CCP cadres and instructors.⁷⁵

70. Lilian Tunai Mulati, “China-Kenya Foreign Aid Relations: Examining Its Possible Links with Kenya's Human Rights Profile,” *International Journal of Research and Innovation in Social Science* 3, no. 10 (October 2019): 720–21.

71. Ministry of Foreign Affairs, “Bilateral Relations.”

72. Ministry of Foreign Affairs, “Bilateral Relations.”

73. Teddy Ng, “Kenya Looks East to ‘Sincere Friend’ in China,” *South China Morning Post* (website), August 19, 2013, https://www.scmp.com/news/china/article/1297869/facing-icc-trial-kenyan-president-uhuru-kenyatta-welcomed-china-visit?module=perpetual_scroll_0&pgtype=article&campaign=1297869.

74. Justus Wanga, “Jubilee Looks to the Communist Party for Lessons,” *Nation* (website), September 12, 2016, <https://nation.africa/kenya/news/politics/jubilee-looks-to-the-communist-party-for-lessons-1239712>.

75. Wanga, “Jubilee Looks”; and *China Daily*, “Communist Party of China Shares Tips with Kenya's Jubilee Party,” Embassy of the PRC in the Republic of Kenya (website), July 16, 2018, <https://www.mfa.gov.cn/ce/ceke/eng/xw/t1577470.htm>.

That same year, Kenya and China upgraded their partnership to “Strategic Cooperative Partnership Relations” [全面戰略合作夥伴關係], the highest level of relations China can have with any country.⁷⁶

Tanzania

The People’s Liberation Army helped to build Tanzania’s modern military from scratch after a failed coup in 1964, the same year Tanganyika merged with Zanzibar to form the socialist United Republic of Tanzania.⁷⁷ Tanzania’s founding president, Julius Kambarage Nyerere (popularly known as “Mwalimu” or “teacher”), disbanded the old force and built a new one from recruits vetted and selected from the Tanganyika African National Union, later renamed the Chama cha Mapinduzi or the Revolutionary Party of Tanzania.⁷⁸ While building the army, Chama cha Mapinduzi members demonstrated absolute loyalty to the party—a norm that they shared with members of the Chinese Communist Party.

The first shipment of Chinese weaponry and instructors arrived in Tanzania and Zanzibar via Algeria after calm had been restored. In 1965, the People’s Liberation Army took over the training and equipping of Tanzania’s marine police and navy after West Germany withdrew its military mission. China then took over the training of the Tanzanian air and land forces in 1970 after Nyerere refused to renew the Tanzanian-Canadian military agreement. Assistance from the Soviet Union and the German Democratic Republic were phased out in the late 1970s, leaving the People’s Liberation Army as Tanzania’s sole external military partner.⁷⁹ Tanzania was virtually in a state of war with white-ruled regimes in Angola, Mozambique, Rhodesia (Zimbabwe), and apartheid South Africa. China’s massive arms deliveries and extensive training missions convinced many Tanzanians it was the only external power with the capacity, political will, and ideological commitment to defend their country.⁸⁰

The Chama cha Mapinduzi and the Chinese Communist Party shared similar structures, ideology, and revolutionary traditions, explaining in part why China has had a long-lasting impact on Tanzania’s political and military development, including that of military doctrine and order of battle.⁸¹ The Chama cha Mapinduzi party guidelines of 1981 (known as “*Mwongozo*”) shared many elements—particularly, the management of state and society and the attributes all leaders were required to model—with the Chinese Communist Party’s governance philosophy.⁸² The 1967 Arusha Declaration, Tanzania’s blueprint for socialist development, shared many normative

76. Zhou Pingjian, “Message from Ambassador,” Embassy of the PRC in the Republic of Kenya (website), accessed on February 23, 2022, http://ke.china-embassy.org/eng/dsxx/dszc/202009/t20200903_7130442.htm.

77. Julius Nyerere, “Ujamaa: The Basis of African Socialism,” in *Freedom and Unity: Uhuru Na Umoja: A Selection from Writings and Speeches 1952–65* (Dar es Salaam, TZ: Oxford University Press Tanzania, 1966).

78. Abillah Omari, “Civil-Military Relations in Tanzania,” in *Ourselves to Know: Civil-Military Relations and Defense Transformation in Southern Africa*, ed. Rocky Williams, Gavin Cawthra, and Diane Abrahams (Pretoria, SA: Institute for Security Studies, 2003), 89–106.

79. Martin Bailey, “Tanzania and China,” *African Affairs* 74, no. 294 (January 1975): 39–50.

80. Bailey, “Tanzania and China.”

81. Donovan Chau, “Ally in the East: 21st Century Sino-Tanzanian Strategic Relations and Its Implications for US Africa Policy,” *Special Warfare* 26, issue 1 (January–March 2013).

82. Chama cha Mapinduzi, *Mwongozo wa Chama cha Mapinduzi* (Dar es Salaam, TZ: Printpak Tanzania, 1981).

and institutional aspects with the Chinese Communist Party's philosophy, although the former espoused an indigenous blend of socialism that had been adapted to African conditions.⁸³

Chinese and Tanzanian leaders describe their relations as an "All Weather Friendship."⁸⁴ In 2013, China and Tanzania upgraded their relations to a "Comprehensive Cooperative Strategic Partnership."⁸⁵ Thanks to a deep and enduring relationship, China still holds a near-monopoly on combat training and the supply of armaments to the Tanzania People's Defence Force. Indeed, between 2000 and 2018, Tanzania received more than 90 percent of its arms transfers from China.⁸⁶

The Tanzania People's Defence Force also has a high level of interoperability with the People's Liberation Army, evidenced by the large amounts of Chinese weaponry in the former's arsenal, the types of joint exercises the former conducts, and their frequency. On March 29, 2011, Chinese special operations forces from the PLA Navy's 7th Naval Convoy conducted joint exercises with the Tanzania People's Defence Force on special operations tactics, including unarmed combat, amphibious landing, concealed tactical rowing, and enemy capture. The "Beyond 2014" naval exercise involved more than 100 Chinese and Tanzanian officers and men.⁸⁷ The exercise focused on interoperability, marine tactics, counterpiracy, and counterterrorism operations.

In addition, in December 2019, the People's Liberation Army and Tanzania People's Defence Force conducted a 25-day-long, joint exercise codenamed "Sincere Partners-2019" at the Chinese-built Comprehensive Training Centre at Mapinga that involved more than 300 troops from the Tanzania People's Defence Force marines and the People's Liberation Army's 73rd Army Group. The exercise focused on joint troop drills, exchange of combat experience, and a command post exercise.⁸⁸

Tanzania and China remain anchored in their shared history, even though Chama cha Mapinduzi abandoned socialism and adopted multiparty democracy. In 2018, the Chama cha Mapinduzi secured a \$45-million grant from the Chinese Communist Party toward the construction of the Mwalimu Julius Nyerere Leadership School, a joint effort with the Former Liberation Movements of Southern Africa. The school, which opened in March 2022, is expected to train party cadres from

83. Priya Lal, "Self-Reliance and the State: The Multiple Meanings of Development in Early Post-Colonial Tanzania," *Journal of the International African Institute* 82, no. 2 (May 2012): 212–34.

84. Xinhua, "Interview: Tanzania-China All-Weather Friendship Grows Stronger, Deeper, Says Tanzanian FM," Xinhuanet (website), November 24, 2011, http://www.news.cn/english/2021-11/24/c_1310329826.htm; and "President Xi Jinping Meets with Zanzibar President Ali Mohamed Shein of Tanzania," Embassy of the PRC in the United States of America (website), May 28, 2013, <https://www.mfa.gov.cn/ce/ceus/eng/zgyw/t1045944.htm>.

85. "Xi Jinping Holds Talks with His Tanzanian Counterpart Kikwete, Agreeing to Develop a Comprehensive Cooperative Partnership Featuring Mutual Benefit and Win-Win Results," Embassy of the PRC in the United Republic of Tanzania (website), April 12, 2013, http://tz.china-embassy.org/eng/topics/xjpxzftzt/201304/t20130412_7262076.htm.

86. Hendrix, "Arms and Influence?"

87. defenceWeb, "China, Tanzania Carrying Out Month Long Joint Naval Drills," defenceWeb (website), October 24, 2014, <https://www.defenceweb.co.za/security/maritime-security/china-tanzania-carrying-out-month-long-joint-naval-drills/>.

88. Panyue, "Sincere Partners-2019"; and defenceWeb, "Chinese-Built Military Training Centre Opens in Tanzania," defenceWeb (website), February 13, 2018, <https://www.defenceweb.co.za/land/land-land/chinese-built-military-training-centre-opens-in-tanzania/>.

these countries on party building, revolutionary norms in the postliberation context, and topics in military leadership.⁸⁹

Botswana

Like Kenya, Botswana was averse to establishing ties with communist states, leaving China little room for maneuver. Botswana maintained relations with Taipei, had no standing army, and was economically dependent on apartheid South Africa and Rhodesia.⁹⁰ Botswana's only independent neighbor was Zambia. But by the mid-1970s, Botswana's cautious policy of preserving its survival by cohabiting with its militarily powerful, white-ruled neighbors had failed.⁹¹ The neighbors launched frequent incursions on Botswana's soil in search of Zimbabwean refugees. In desperation, Botswana turned to the Frontline States for help, which resulted in the construction of the Botswana-Zambia Highway to bypass Rhodesian road links.⁹² In 1971, Botswana joined the Frontline States in voting to readmit the People's Republic of China to the UN.⁹³

In 1974, Botswana withdrew from the South African rand monetary area to free itself from the apartheid economy. Botswana then established diplomatic relations with China in 1975.⁹⁴ China embarked on a slow but deliberate policy of building a comprehensive and multifaceted economic relationship with Botswana. By the late 1980s, the two sides had become increasingly close, to the point where, in 1989, Botswana joined fellow African countries to support China during the Tiananmen Square protests.⁹⁵

China, however, did not have military ties with Botswana. The first recorded military contact was in 2006, when China offered 32 annual military training quotas.⁹⁶ In 2007, these training slots grew to 43, a figure that has continued to increase every year.⁹⁷ By 2012, over 300 Botswana Defence Force senior officers had trained in Chinese military schools, spending one year in the country on average.⁹⁸

In 2013, PLA trainers were invited to Gaborone to train the Botswana Defence Force honor guard, making Botswana the first country to receive this kind of training from the People's Liberation

89. Paul Nantulya, "Grand Strategy and China's Soft Power Push in Africa," *Spotlight* (blog), August 30, 2018, <https://africacenter.org/spotlight/grand-strategy-and-chinas-soft-power-push-in-africa/>.

90. Ian Taylor, "Botswana's 'Independent Foreign Policy': Gaborone-Beijing Relations," *Botswana Notes and Records* 30 (1998): 76–86.

91. Richard Dale (1993) "The Politics of National Security in Botswana: 1900–1990," *Journal of Contemporary African Studies*, 12:1, 40–56.

92. Taylor, "Independent Foreign Policy."

93. Taylor, "Independent Foreign Policy."

94. Taylor, "Independent Foreign Policy."

95. Taylor, "Independent Foreign Policy."

96. "Brief Introduction of Education Cooperation between China and Botswana," Embassy of the PRC in the Republic of Botswana (website), accessed on February 23, 2022, <https://www.mfa.gov.cn/ce/cebw/eng/xwtdt/t356945.htm>.

97. "Ambassador Ding Xiaowen Held a Pre-Departure Reception for Botswana Students to Be Studying in China," Embassy of the PRC in the Republic of Botswana (website), August 24, 2007, <https://www.fmprc.gov.cn/ce/cebw/eng/sgxx/Activities/t357061.htm>.

98. "China-Botswana Military Exchanges Contribute to Bilateral Relationship," China-Africa Economic and Trade Network (website), accessed on February 23, 2022, <http://www.zfjmw.com/en/h-nd-2865.html>.

Army (the other being Rwanda in 2019).⁹⁹ In 2017, China deployed the 15th Chinese medical team to Botswana, building on a tradition dating back to 1981.¹⁰⁰ The following year, China reiterated its commitment to constructing a logistics base for the Southern African Development Community standby force in Rasesa, Botswana.¹⁰¹ In 2021, Botswana became the 44th African country to sign on to China's Belt and Road Initiative, and Botswana was one of the five African countries visited by Chinese State Councillor and Foreign Minister Wang Yi at the start of the year.¹⁰²

The Botswana government has often suggested the Chinese development model is conducive to the government's needs, particularly in the area of industrialization. But the uptake of shared political norms with the Chinese Communist Party has arguably not been as deep as Tanzania's because of the Botswana Democratic Party's vastly different history and experience with China. Nevertheless, the two parties have established formal exchanges on ideology, state governance, and economic policy. When the Forum on China-Africa Cooperation was established in 2000, fewer than 200 Botswana civil servants and party leaders had participated in CCP exchanges. By the seventh Forum on China-Africa Cooperation Summit in 2018, this number had ballooned to over 2,000 government and party leaders and around 500 military professionals.¹⁰³ Despite the considerable expansion of relations between the two countries since the late 1980s, they do not yet have a formal strategic partnership.

Algeria

Algeria was the first Muslim-majority nation to build a comprehensive strategic partnership with China.¹⁰⁴ China was the principal partner of the Maoist National Liberation Army during its armed struggle against France.¹⁰⁵ The National Liberation Front's armed wing and its successor, the Algerian People's National Armed Forces, were also conduits for Chinese military aid to other African movements.¹⁰⁶ African revolutionaries viewed Algeria as the "spiritual mecca" of armed struggle, putting it in the same league as Egypt, Mozambique, and Tanzania.¹⁰⁷ The liberation movements of Angola, Cabo Verde, Guinea, Mozambique, and South Africa are among the dozens of Chinese-backed guerilla groups that received training in Algeria.¹⁰⁸

99. "China and Botswana," Ministry of Foreign Affairs of the PRC, accessed on February 23, 2022, https://www.fmprc.gov.cn/mfa_eng/wjb_663304/zzjg_663340/fzs_663828/gjlb_663832/2924_663854/.

100. "China and Botswana Signed the Protocol on the 15th Chinese Medical Team," Embassy of the PRC in the Republic of Botswana (website), December 1, 2017, <https://www.fmprc.gov.cn/ce/cebaw/eng/xwtd/t1515797.htm>.

101. defenceWeb, "China to Help with SADC Regional Logistics Depot," defenceWeb (website), September 17, 2019, <https://www.defenceweb.co.za/joint/logistics/china-to-help-with-sadc-regional-logistics-depot/>.

102. "Decoding China's Africa Strategy beyond 2021: A Discussion with Paul Nantulya," Habari Network (website), March 13, 2021, <https://www.thehabarinetwork.com/decoding-chinas-africa-strategy-beyond-2021-a-discussion-with-paul-nantulya>.

103. "China's Africa Strategy."

104. Li Lianhe, "Walking the Development Road Together," *China Daily* (website), March 22, 2021, <http://www.chinadaily.com.cn/a/202103/22/WS6057da8fa31024ad0bab08ca.html>.

105. Youcef Oussama Bounab, "Algeria's Forgotten Revolutionary History," *Africa Is a Country*, March 19, 2020, <https://africasacountry.com/2020/03/algerias-forgotten-revolutionary-history>.

106. Robert A. Mortimer, "The Algerian Revolution in Search of the African Revolution," *Journal of Modern African Studies* 8, no. 3 (October 1970): 363–87.

107. Mortimer, "The Algerian Revolution."

108. Mortimer, "The Algerian Revolution."

South Africa's Nelson Mandela trained in Algeria as the founder and first commander of the African National Congress's guerilla army, Umkhonto we Sizwe. On returning to Algeria in 1991 after his release from 27 years of imprisonment, he remarked, "The Algerian army made me a man."¹⁰⁹

China continues to be an important source of weaponry for the Algerian military. Chinese arms exports to Algeria increased 46-fold between 2008–12 and 2013–17, during which time Russian sales dropped 35 percent.¹¹⁰ Remove Algeria and Chinese sales to Africa decreased 12 percent over the same period.¹¹¹ In addition, Algeria buys no American armaments, and the only US troops stationed in the country are at the embassy.¹¹² China is also an important partner in military education. Like their African counterparts, Algerian officers attend lower, intermediate, and higher academic [学历教育] and professional education [任职教育] institutions in China, such as the Nanjing Army Command College, the Dalian Naval Academy, the PLA Air Force Command College, and strategic-level schools, such as the National University of Defense Technology.

China has also strengthened its position as a supplier of sophisticated armaments. In 2016, Algeria received its third Chinese-built corvette with a displacement of about 2,880 tons.¹¹³ Between 2014 and 2018, the bulk of China's global shipments of highly advanced weaponry—roughly 64 percent—went to three countries: Algeria, Bangladesh, and Pakistan.¹¹⁴ In 2020, Algeria became the first international recipient of the Hongjian-12 [红箭-12] shoulder-mounted, antitank missile system produced by Norinco.¹¹⁵ In 2022, Algeria will take delivery of a 96-meter corvette from China's Hudong-Zhonghua Shipbuilding.¹¹⁶

Algeria's National Liberation Front has been receptive to norm exchanges and diffusion, especially norms of governance style, party control of the state and military, and international solidarity with Chinese positions. The two sides engage in multiyear capacity-building exchanges designed to suit Algeria's local conditions.¹¹⁷ For example, between 2015 and 2018, 400 Algerian civil servants underwent training to prepare them to implement local government reforms

109. Abdeldjalil Larbi Youcef, "The Algerian Army Made Me a Man: Nelson Rolihlahla Mandela: 1918–2013," *Transition* 116 (2014): 67–79.

110. Nan Tian, "China's Arms Trade: A Rival for Global Influence?," Interpreter (website), September 17, 2018, <https://www.lowyinstitute.org/the-interpreter/chinas-arms-trade-rival-global-influence>.

111. Tian, "China's Arms Trade."

112. Missy Ryan, "Pentagon Calls for New Cooperation with Algeria to Counteract Growing Russian Influence in Africa," *Washington Post* (website), October 1, 2020, https://www.washingtonpost.com/national-security/us-military-africa-russia/2020/10/01/ac53cf66-0415-11eb-8879-7663b816bfa5_story.html.

113. "Third and Last Chinese-Built C28A Corvette Delivered to the Algerian Navy," Navy Recognition (website), July 15, 2016, <https://www.navyrecognition.com/index.php/naval-news/naval-news-archive/2016/july-2016-navy-naval-forces-defense-industry-technology-maritime-security-global-news/4205-third-and-last-chinese-built-c28a-corvette-delivered-to-the-algerian-navy.html>.

114. Michael Raska and Richard A. Bitzinger, "Strategic Contours of China's Arms Transfers," *Strategic Studies Quarterly* 14, no. 1 (Spring 2020).

115. Eric Olander "The Algerian Army Is the First Customer for China's New Shoulder-Mounted HJ-12 Anti-Missile System," China-Africa Project (website), July 22, 2020, <https://chinaafricaproject.com/2020/07/22/the-algerian-army-is-the-first-customer-for-chinas-new-shoulder-mounted-hj-12-anti-missile->.

116. defenceWeb, "Algerian Navy Orders Chinese Corvette," defenceWeb (website), June 30, 2020, <https://www.defenceweb.co.za/featured/algerian-navy-orders-chinese-corvette/>.

117. Ahcène Boukhelfa, "Long-Rooted Friendship," *China Daily* (website), updated October 20, 2020, <http://epaper.chinadaily.com.cn/a/202010/20/WS5f8e40cea31099a2343511c5.html>.

inspired by Chinese service delivery models. The program was conducted by the Sino-Algerian Governance Building–Capacity Forum, a partnership between the Chinese Academy of Governance and Algeria’s Ministry of Interior and Local Authorities.¹¹⁸

Egypt

Egypt was the first African and Muslim-majority country to recognize the People’s Republic of China in 1956.¹¹⁹ When the revolutionary Arab Socialist Union governed Egypt under Gamal Abdel Nasser and Anwar Sadat, China engaged it as a fellow revolutionary state committed to supporting the Pan-Africanist ideals of armed struggle, anticolonialism, and anti-imperialism.¹²⁰ Under the conservative administration of Hosni Mubarak’s National Democratic Party, Egypt’s dealings were less inclined toward revolution, echoing the relations China built with conservative countries like Botswana and Kenya. This trend continued under Mohamed Morsi’s Muslim Brotherhood and Abdel Fattah al-Sisi’s military government.

China played distinct roles in each phase. Under Nasser and Sadat, Egypt was a linchpin in Africa’s revolutionary struggles, providing moral, material, and political support and training facilities, especially to the Southern African liberation movements.¹²¹ Cairo served as a frontline base for the CCP’s influence operations by, among other actions, playing host to the Afro-Asian People’s Solidarity Organisation, which was dedicated to national liberation.¹²² Xinhua News Agency opened its first international bureau in Cairo in 1958.¹²³ On the military side, Chinese aid escalated after Cairo distanced itself from the Soviet Union in the mid-1970s.¹²⁴ Egypt and China signed a weapons agreement in 1975—China’s first in the Middle East—that saw the delivery of Xian H-6 strategic bombers to the Egyptian Air Force.¹²⁵

Throughout the 1970s and 1980s, Egypt’s purchases of Chinese hardware extended to submarines, destroyers, missile boats, and advanced fighters like the Chengdu F-7B and the Shenyang J-6, which Egypt was allowed to assemble.¹²⁶ The Egyptian military establishment was amenable to the norms of the Chinese military because the former has traditionally been socialized to view itself as the vanguard of the nation.¹²⁷ Indeed, the mechanisms of military control and indoctrination used by

118. Xinhua News Agency, “Algeria, China Hail Fruitful Cooperation in Creating Good Governance,” China Global Television Network (website), December 6, 2018, https://newsaf.cgtn.com/news/3d3d674d31517a6333566d54/share_p.html.

119. Mohamed El Dahshan, “Egyptian Exceptionalism in a Chinese-Led World,” Chatham House (website), February 10, 2021, <https://www.chathamhouse.org/2021/02/egyptian-exceptionalism-chinese-led-world>.

120. Olayiwola Abegunrin, “The Arabs and the Southern African Problem,” *International Affairs* 60, no. 1 (Winter 1983–84): 97–105.

121. Abegunrin, “The Arabs.”

122. Eisenman, “Comrades-in-Arms.”

123. “China Is Broadening Its Efforts to Win Over African Audiences,” *Economist* (website), October 20, 2018, <https://www.economist.com/middle-east-and-africa/2018/10/20/china-is-broadening-its-efforts-to-win-over-african-audiences>.

124. Hiddai Segev and Ofek Riemer, *Not a Flood, but a Rising Current: Chinese Weapons Sales to the Middle East*, Memorandum no. 194 (Washington, DC: Institute for National Strategic Studies, National Defense University Press, August 2019).

125. Segev and Riemer, *Not a Flood*.

126. Segev and Riemer, *Not a Flood*.

127. Nathan J. Brown and Mark Berlin, “Steering the Wide Egyptian State: Ideology or Administration?,” Carnegie Endowment for International Peace (website), May 28, 2020, <https://carnegieendowment.org/2020/05/28/steering-wide-egyptian-state-ideology-or-administration-pub-81924>.

successive ruling parties resemble those of the Chinese Communist Party.¹²⁸ By the mid-1970s, Egypt's military had become less of a party-army hybrid. The military's formative revolutionary culture and practice of viewing itself as the guardian of the state, however, means it has always played a dominant role in politics.

Egypt's decision to maintain strategic relationships with Western powers did not diminish China's military influence. For example, PLA-controlled defense firms like Norinco remained active in Egypt's military industries and built strong relationships with the country's National Organization for Military Production.¹²⁹ In June 1990, China agreed to modernize Egypt's Sakr missile factory.¹³⁰ In 2005, the China National Aero-Technology Import & Export Corporation awarded the Arab Organization for Industrialization, Egypt's defense industry organization, a production certificate for China's 80 Karakorum-8E pilot training aircraft.¹³¹

More recently, the Arab Organization for Industrialization developed six Egyptian unmanned aerial vehicles in collaboration with Chinese firms.¹³² The Sino-Egyptian military relationship has flourished under Abdel Fattah al-Sisi. Three factors account for this flourishing. First, like Kenyatta, Sisi has sought to diversify Egypt's international partnerships due to his Western allies' negative reactions to his coup in 2013 and their heavy criticism of his human-rights record.¹³³ Between 2014, when the two sides upgraded their relations to a Comprehensive Strategic Partnership [全面战略伙伴关系], and 2020, Sisi visited China six times in as many years and signed 25 bilateral agreements.¹³⁴ By comparison, Mubarak also visited China six times, but his visits spanned his entire 30-year rule.¹³⁵

Second, Sisi's policy shift has created an opportunity for China to cultivate Egypt as a vital hub in its Belt and Road project. In 2016, the two sides signed a five-year agreement to conjoin Egypt's New Suez Canal project with China's Maritime Silk Road through the joint Suez Economic and Trade Cooperation Zone, 120 kilometers east of Cairo.¹³⁶ The People's Liberation Army's interactions with the Egyptian military reflect this upward trend in relations. Between 2003 and 2016, Egypt ranked fourth in the number of visits by senior PLA leaders, trailing only Cuba, Russia, and the United States. Over the same period, Egypt also hosted three joint military exercises with

128. Brown and Berlin, "Wide Egyptian State."

129. John Calabrese, *Towering Ambitions: Egypt and China Building for the Future* (Washington, DC: Middle East Institute, October 6, 2020).

130. Savita Pande, "Missile Technology Control Regime: Impact Assessment," *Strategic Analysis* 23, no. 6 (September 1999).

131. Xinhua, "China Award Egypt Aircraft Production Licence," *China Daily* (website), August 30, 2005, http://www.chinadaily.com.cn/english/doc/2005-08/30/content_473362.htm.

132. Gary Mortimer, "Egypt: Nation Produces UAV in Cooperation with China," sUAS News, May 18, 2002, <https://www.suasnews.com/2012/05/egypt-nation-produces-uav-in-cooperation-with-china/>.

133. News Agencies, "China, Egypt Hold 'Similar Visions and Strategies': President Xi," Al Jazeera, February 5, 2022, <https://www.aljazeera.com/news/2022/2/5/xi-says-china-egypt-hold-similar-visions-and-strategies>; and Christina Lin, *China's Strategic Shift towards the Region of the Four Seas: The Middle Kingdom Arrives in the Middle East*, Institute for Strategic, Political, Security and Economic Consultancy Strategy Series no. 226 (Berlin: Institute for Strategic, Political, Security and Economic Consultancy, April 2013).

134. Dahshan, "Egyptian Exceptionalism."

135. Dahshan, "Egyptian Exceptionalism."

136. Xinhuanet, "China, Egypt Agree to Boost Cooperation under the Belt and Road Initiative," State Council Information Office of the PRC (website), January 22, 2016, <http://www.scio.gov.cn/32618/Document/1465573/1465573.htm>.

the People's Liberation Army, the same number of PLAN port calls, and 32 senior-level defense meetings—more than any other African country.¹³⁷

Continuity and Change in the People's Liberation Army's Instruments of Engagement

Despite the major shifts in Chinese foreign policy, since the struggles for African independence, the People's Liberation Army continues to be used in minimal roles to support policy objectives. Second, the People's Liberation Army appears to favor professional and political exchanges over other forms of military engagement. Third, the People's Republic of China has used large deployments of troops in nontraditional roles, such as counterpiracy and peacekeeping roles. The highest number of PLA interactions over the past two decades occurred in 2010, when the organization participated in 202 leader-to-leader meetings (up from 172 in 2009) and only 14 exercises and 26 port calls (up from 8 and 11, respectively, in 2009).¹³⁸ Military exercises rose to 124 in 2016, but the People's Liberation Army still conducted more leader-to-leader meetings (131). Similar patterns were evident in the People's Liberation Army's activities in Africa. Between 2003 and 2016, China conducted 13 military exercises, 22 port calls, and 259 leader-to-leader and people-to-people exchanges in Africa, amounting to a much stronger focus on relationship building than on other types of military engagement.¹³⁹

Over the same period, the People's Liberation Army mostly engaged its former revolutionary partners—particularly, the Former Liberation Movements of Southern Africa. Indeed, Southern African countries held more military interactions with the Chinese military than did countries from any other region of Africa.¹⁴⁰ Interestingly, the Former Liberation Movements of Southern Africa members also held more political and ideological exchanges with the CCP International Liaison Department than did countries from any other region of Africa. Between 2016 and 2018, the Former Liberation Movements of Southern Africa parties accounted for 25 exchanges compared to 11, eight, and three for political parties in western, eastern and Central, and North Africa, respectively.¹⁴¹ Led by CCP leaders, these interactions represented attempts to share governance norms, learn from Chinese experience in governance, and strengthen the countries' ruling parties.¹⁴²

The military interactions were organized as functional exchanges led by the heads of the four major departments of the People's Liberation Army. Between 2003 and 2016, the organization

137. Kenneth Allen, Phillip C. Saunders, and John Chen, *Chinese Military Diplomacy, 2003–2016: Trends and Implications*, China Strategic Perspectives no. 11 (Washington, DC: Institute for National Strategic Studies, National Defense University Press, July 2017).

138. Allen, Saunders, and Chen, *Chinese Military Diplomacy*.

139. Allen, Saunders, and Chen, *Chinese Military Diplomacy*.

140. Heidi Holtz and Kenneth Allen, "Military Exchanges with Chinese Characteristics: The People's Liberation Army Experience with Military Relations," in *The PLA at Home and Abroad: Assessing the Operational Capabilities of China's Military*, ed. Roy Kamphausen et al. (Carlisle, PA: Strategic Studies Institute, US Army War College Press, 2010), 429–80.

141. Lina Benabdallah, *Shaping the Future of Power: Knowledge Production and Network-Building in China-Africa Relations* (Ann Arbor, MI: University of Michigan Press, 2020), 33–39.

142. Benabdallah, *Shaping the Future*.

conducted high-level exchanges in Algeria (6), Botswana (4), Burundi (2), Djibouti (8), Cameroon (4), Côte D'Ivoire (2), the Democratic Republic of the Congo (5), Ethiopia (8), Egypt (32), Gabon (4), Ghana (5), Kenya (10), Lesotho (3), Morocco (6), Malawi (3), Mozambique (12), Namibia (14), Niger (2), Rwanda (3), Sudan (14), South Africa (25), Tanzania (24), Zambia (14), and Zimbabwe (12).¹⁴³

In prior years (2001–08), the two deputy chiefs of the CMC Joint Staff Department held exchanges in Angola, Cameroon, Egypt, Lesotho, Mozambique, Namibia, Nigeria, Tanzania, and Zimbabwe.¹⁴⁴ The CMC Political Work Department sent delegations to Cameroon, Egypt, Morocco, Mozambique, Uganda, Zambia, and Zimbabwe “to create a military security environment featuring mutual trust and mutual benefit.”¹⁴⁵ The CMC Logistic Support Department interacted with Egypt, Kenya, Morocco, Tanzania, Tunisia, and Zambia. The political commissars of this department held dialogues in Egypt, Ethiopia, Tanzania, Zambia, and Zimbabwe.¹⁴⁶

The CMC Equipment Development Department visited South Africa four times and Namibia once. The commanders and political commissars of China's various military regions went to Angola, Botswana, Benin, Cameroon, Djibouti, Egypt, Eritrea, Ethiopia, Gabon, Guinea, Kenya, Madagascar, Mali, Mauritania, Namibia, Rwanda, Sudan, Tanzania, Togo, Uganda, and Zambia.¹⁴⁷ As for naval engagements, the PLA Navy has deployed 39 task forces that have escorted 7,000 Chinese and foreign vessels since 2008.¹⁴⁸ The People's Liberation Army has also deployed over 30,000 military peacekeepers to 17 UN missions over the same period.¹⁴⁹

Professional Military Education (PME)

In China, African officers train in the following three types of schools:

- mid-level command and academic institutions, such as the Nanjing Army Command College and the command colleges of the other PLA service arms
- higher, specialized, academic and professional educational institutions, such as the PLA Army Medical University (formerly the Third Medical Military University)
- strategic-level schools, such as the National Defense University and its affiliated schools

The curriculum in each institution reflects the PLA's structure, doctrine, and traditions, thereby giving students comprehensive exposure to the Chinese experience. The PLA officer system has

143. Allen, Saunders, and Chen, *Chinese Military Diplomacy*.

144. Holtz and Allen, “Military Exchanges.”

145. State Council Information Office of the PRC, “China's National Defense in 2008” (white paper, State Council Information Office of the PRC, January 2009).

146. Holtz and Allen, “Military Exchanges.”

147. Holtz and Allen, “Military Exchanges.”

148. State Council Information Office, “China and Africa.”

149. State Council Information Office, “China and Africa.”

five career tracks: military officer, political commissar, logistics, equipment, and technical.¹⁵⁰ Whether African officers still receive political commissar training is unclear because many African militaries dropped it as a career track after transitioning to multiparty systems. Students, however, are exposed to China's political commissar system as part of their educational experience. For example, every PLA learning institution has a commander, political commissar, and deputies. These officers constitute a “political work system” that consists of a party committee [党委] and standing committee [常委].¹⁵¹

At the PLA National Defense University and its affiliated schools, senior leaders from the CCP Central Military Commission and other top-party organs like the National People's Congress are usually invited to lecture and interact with students and share experiences.¹⁵² In addition to attending military schools, African students continue to train in the CCP's political schools, such as the China Executive Leadership Academy in Pudong. This academy, which is one of four top cadre schools directly subordinate to the CCP Central Committee, describes itself as “a base for educating revolutionary traditions and a crucible for tempering and enhancing leadership capacities of Chinese leaders.”¹⁵³

Unlike the more traditional PLA and CCP political schools, the China Executive Leadership Academy in Pudong explicitly seeks to capture an international audience to instill China's models more systematically among foreign partners.¹⁵⁴ Accordingly, the academy has foreign lecturers on its staff and an international department to manage foreign exchanges. The academy claims to have “cultivated 7,000 foreign students since its establishment”—among them, senior leaders from South Sudan and South Africa.¹⁵⁵

Assessing African Attitudes

Little research on African attitudes toward Chinese PME exists. A 2010 PLA-edited compilation titled *My Impression of China: China's Image in the Eyes of Foreign Officers* is the only book-length product that attempts to capture reflections from PLA National Defense University alumni.¹⁵⁶ The compilation mostly consists of papers on various Chinese foreign and domestic policy topics and says little about the authors' overall assessments. Some African alumni have written about their impressions on the PLA National Defense University website, in PLA-affiliated media such as *PLA Daily*, in other Chinese media, and in the African media. These accounts are overwhelmingly positive and uncritical toward China. The anecdotal evidence, on the other hand, offers some nuance, but

150. Kenneth Allen and Mingzhi Chen, *The People's Liberation Army's 37 Academic Institutions* (Montgomery, AL: China Aerospace Studies Institute, 2020).

151. Allen and Chen, *37 Academic Institutions*.

152. “ICDS Overview.”

153. “An Introduction of China Executive Leadership Academy Pudong,” China Executive Leadership Academy Pudong (website), accessed on April 16, 2021, <https://en.celap.org.cn/col/col2084/index.html>.

154. Lina Benabdallah, “Power or Influence? Making Sense of China's Evolving Party-to-Party Diplomacy in Africa,” *African Studies Quarterly* 19, issues 3–4 (October 2020).

155. Benabdallah, “Power or Influence?”

156. Yingli Zhang and Fangfang Wang, *My Impression of China: China's Image in the Eyes of Foreign Officers* (Beijing: China Intercontinental Press, 2011).

the evidence remains inconclusive in the absence of more comprehensive research. For the purposes of this chapter, the author collected views from serving and retired officers from Burundi, Mali, and Uganda. Three general issues can be gleaned from this feedback.

First, China's reputation as a sponsor of African independence, historical contacts with African military leaders, and familiarity with African military systems are viewed as the PLA's greatest sources of appeal. In addition, Chinese training is popular because many African students are eager to learn about how China caught up with other world powers when it had a lower per-capita gross domestic product than many African countries did at the time of independence.

Second, the People's Liberation Army's training programs are viewed as an opportunity for African military professionals to interact with and learn from their fellow African students. This view increases China's popularity as a training destination because Africans view it as offering more training events than any other country.

Third, the PLA training model is viewed as excellent and relevant to African needs at the junior and middle levels and in technical areas, such as information technology and computers, logistics, and military medicine. The peacekeeping training offered at the Ministry of National Defense Peacekeeping Centre in Huairou is also held in high regard because of the high demand for such training in Africa.¹⁵⁷ Chinese PME is perceived as weaker at the strategic (PLA National Defense University) level. The training offered by the United States and other Western militaries at this level is viewed as more dynamic, relevant, and adaptable. Furthermore, this training is seen as being more "marketable" for one's career, potentially leading to the opportunity to work at the international level during both active service and retirement. This feedback is supported by empirical evidence. A 2019 study by the Africa Center for Strategic Studies at the US National Defense University found 97 percent of Africa's emerging officers across 37 countries held US and international training in high regard.¹⁵⁸

Several additional pieces of anecdotal evidence suggest, except for a few schools, such as the Dalian Naval Academy, foreign students study separately from their Chinese colleagues while in China. This practice tends to defeat the purpose of such education, which is to build lasting relationships that can forge strong and enduring defense relations between China and Africa. Most experts familiar with Chinese military training concur foreign students are segregated from their Chinese colleagues, particularly at the senior-level schools—probably due to counterintelligence concerns. Official photographs and stories from a few schools, such as the Nanjing Army Command College and the Dalian Naval Academy, show Chinese and foreign

157. Kwezi Mngqibisa (former senior peacekeeping trainer, African Center for the Constructive Resolution of Disputes and Southern African Development Community Regional Peacekeeping Training Center), interview by the author, November 2, 2021.

158. Kwesi Aning and Joseph Siegle, *Assessing Attitudes of the Next Generation of African Security Sector Professionals*, Africa Center Research Paper no. 7 (Washington, DC: Africa Center for Strategic Studies, May 1, 2019).

(including African) officers working together in class and field exercises, suggesting the segregation is not applied across the board.¹⁵⁹

Future Directions

The People's Liberation Army implements the mandates of the Chinese Communist Party, which, nearly three decades ago, concluded reengaging its “old friends” in Africa was in the party's strategic, long-term interest. As China's influence in Africa continues to grow, the PLA's interactions will become more prominent. Increasing China's appeal while cultivating networks of social capital and goodwill will be key to enhancing the relationships the People's Liberation Army will need to advance Chinese interests, key among which is to increase China's ability to operate effectively overseas to support the “new historic missions.” China's military leaders passed the first test in this quest when African countries gave China the go-ahead to open the PLA support base in Djibouti [中国人民解放军驻吉布提保障基地] in August 2017. This decision is worth noting because 16 months before the base started operations, the African Union Peace and Security Council issued a communique warning member states to always be “circumspect” whenever they enter into agreements “that would lead to the establishment of foreign military bases in their countries.”¹⁶⁰

The groundwork the Chinese Communist Party laid in Africa prior to 2017 played no small part in inducing party members to overlook their previous rulings against foreign basing and to allow the People's Liberation Army to proceed with its plans. At the 2015 Forum on China-Africa Cooperation summit, China pledged \$60 billion in financing, development, and assistance to Africa for the following three years, tripling the amount offered at the 2012 summit.¹⁶¹ China established the \$100 million China-Africa Peace and Security Fund to support the African Union's peace and security architecture for five years and a UN Peace and Development Trust Fund for UN projects, including building African countries' capacity to participate in international peacekeeping missions.¹⁶² African states were also mindful of the \$200 million African Union headquarters having been entirely built and funded by China as a “gift to the African people.”¹⁶³ Simply put, China had garnered more than enough political and social capital, making it highly unlikely African nations would refuse Beijing's request.

159. “Popular Chinese Military Media Outlet ‘Military Express’: ‘China's Training of Officers for Foreign Armies Is an Important Means of Realizing Its Foreign Strategy,’” Middle East Media Research Institute (website), July 13, 2021, <https://www.memri.org/reports/popular-chinese-military-media-outlet-military-express-chinas-training-officers-foreign>; *Global Times*, “China's West Point Trains Foreign Officers,” *Daily Tribune* (website), January 26, 2019, <https://tribune.net.ph/index.php/2019/01/26/chinas-west-point-trains-foreign-officers/>; and Li Qinwei and Cao Jinping, “First Day of Chinese and Foreign Naval Cadets' Joint Training,” *People's Daily Online* (website), April 20, 2012, <http://en.people.cn/90786/7793297.html>.

160. Andrews Atta-Asamoah, “Proceed with Caution: Africa's Growing Foreign Military Presence,” *ISS Today* (blog), August 27, 2019, <https://issafrica.org/iss-today/proceed-with-caution-africas-growing-foreign-military-presence>.

161. Jacopo Prisco, “China Pledges \$60 Billion in Funding Support to Africa,” *CNN* (website), December 4, 2015, <https://www.cnn.com/2015/12/04/africa/china-xi-jinping-60-billion-funding/index.html>.

162. Nantulya, “Strategic Application.”

163. “African Union Opens Chinese-Funded HQ in Ethiopia,” *BBC News* (website), January 28, 2012, <https://www.bbc.com/news/world-africa-16770932>.

The art of cultivating networks of social capital is deeply ingrained in the Chinese approach to partnerships. In Africa, the foundation was laid from the 1950s to the 1990s, when the People's Liberation Army and the Chinese Communist Party firmly established themselves as dedicated champions of African independence. China continues to ride on this goodwill because the stories of the anticolonial and antiapartheid struggles resonate heavily with African audiences and are a major source of social capital. Chinese leaders also understood another key lesson—namely, the value of being seen to be completely aligned with partner priorities to establish the obligation for African countries to support Chinese goals in exchange. The PLA's steadfast support for African struggles is one of the reasons newly independent African states decided to switch diplomatic relations away from Taipei to Beijing.¹⁶⁴

One key difference between China's previous and current approaches to partnership building is the number of formal and semiformal venues where social capital ties can be harvested and replenished. China trains more African civilian and military professionals than any other industrialized country.¹⁶⁵ By 2021, the Forum on China-Africa Cooperation was providing 100,000 slots for fully paid professional exchanges triennially and distributing them through semistructured forums, such as the China-Africa defense forum, that meet regularly.¹⁶⁶

The key issue for Chinese leaders, therefore, is not whether China has the kind of relationships and political goodwill it needs to establish a more robust military presence in Africa or to expand its expeditionary capabilities. The real question has to do with feasibility—that is, does China have the political will and capacity to take its military relationships several steps higher, and, if so, do the political costs outweigh the benefits? This question remains open. Based on PLA writings, the organization seems to believe its overseas power projection capabilities still lag far behind that of the US military.¹⁶⁷ Secondly, PLA doctrine and ideology frown on the idea of mimicking Russian- or American-style deployments.

Going forward, two additional lines of research would be valuable for further probing the PLA's approach to partnership as the organization continues to transform itself into a global force. First, how do Africa's rising military leaders assess China's military training programs as tools for relationship building? Second, to what extent does the appeal of the Chinese governance model influence the policy choices of political and military leaders from the host nation? These questions touch on the strategic relevance of relationship building, which this chapter argues will become even more important to the People's Liberation Army as it continues to cultivate and build strategically focused relations with a continent that is increasingly key to its global ambitions.

164. Eisenman, "Comrades-in-Arms."

165. Nantulya, "Strategic Application."

166. David Cyranoski, "China to Train African Scientists as Part of \$60-Billion Development Plan," *Nature* (website), October 2, 2018, <https://www.nature.com/articles/d41586-018-06722-5>.

167. Joel Wuthnow and Phillip C. Saunders, "Introduction: Chairman Xi Remakes the PLA," in *Chairman Xi Remakes*.

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Chinese Military and Police Engagement in Latin America

R. Evan Ellis

Chinese military engagement in Latin America and the Caribbean is an important and officially acknowledged part of the People’s Republic of China’s (PRC’s) growing interactions with the region. The 2008 and 2016 Chinese policy white papers on Latin America as well as the 2015 and 2019 Chinese defense white papers expressly mention military and other security activities as an important component of China’s overall engagement with the region.¹ China’s 2019 defense white paper explicitly mentions the country’s strengthening of defense engagement with Latin America and the Caribbean as well as Africa and the South Pacific.²

The economic activities of the People’s Republic of China in Latin America arguably eclipse military ones when examining the resources and people involved and the attention given to economic activities in official discourse and interactions. Such a low profile, including a general avoidance of threatening rhetoric or provocative military actions by Chinese leaders in Latin America, should not distract from the importance of Chinese security activities as an integral part of China’s multidimensional engagement in pursuit of its strategic objectives in the region and globally.³

The core PRC objective—as expressed in leadership statements, such as President Xi Jinping’s “China Dream” speech, and policy documents, such as “Made in China 2025”—is arguably the creation of a prosperous and secure Chinese state.⁴ In economic terms, constructing a prosperous and secure state involves building a strong and diverse economy complemented by a robust commercial relationship with the rest of the world in which Chinese companies have dominant positions in capturing significant portions of the value added in global supply chains and owning strategic assets that give the country predictable access to markets and factor inputs on terms that

1. State Council of the People’s Republic of China (PRC), “China’s Policy Paper on Latin America and the Caribbean” (white paper, State Council of the PRC, November 5, 2008); State Council Information Office of the PRC, “China’s Military Strategy” (white paper, State Council Information Office of the PRC, May 2015); and State Council Information Office of the PRC, “China’s National Defense in the New Era” (white paper, State Council Information Office of the PRC, July 2019).

2. State Council Information Office of the PRC, “China’s National Defense.”

3. R. Evan Ellis, “Understanding and Responding to Chinese Activities in Latin America and the Caribbean,” in *China’s Global Influence: Perspectives and Recommendations*, ed. Scott McDonald and Michael Burgoyne (Honolulu: Asia-Pacific Center for Strategic Studies, 2019), 142–59.

4. Xinhua, “Xi’s Speech at First Session of 13th NPC to Be Published,” *China Daily* (website), May 15, 2020, <https://www.chinadaily.com.cn/a/202005/15/WS5ebe530ca310a8b2411560a2.html>; and “‘Made in China 2025’ Plan Issued,” State Council of the PRC (website), updated May 19, 2015, http://english.www.gov.cn/policies/latest_releases/2015/05/19/content_281475110703534.htm.

provide decision authority to Chinese managers and channel benefits to Chinese companies and the Chinese people.

First launched in 2013 and extended to Latin American in 2017, China's Belt and Road Initiative is consistent with the country's historic concept of the Silk Road and the treasure fleet of Admiral Zheng He and reflects China's contemporary, mercantilist vision.⁵ As will be discussed later, the strategic imperative of protecting this expanding China-oriented infrastructure and the associated operations of PRC-based companies and persons in Latin America and elsewhere complements the more traditional mission of the People's Liberation Army (PLA) of preparing for a conflict against the United States, creating imperatives for engagement by the former and the Chinese state in Latin America.

The PLA's Regional Engagement in Support of PRC Objectives

The purpose of this chapter is not to generate alarm about the level of Chinese military and security engagement in Latin America. The extent of this engagement is more limited than in other parts of the world, and PRC economic engagement eclipses military activity in the region. Rather, the objective is to contribute to an understanding of these activities as an integral piece of China's strategic advance and the construction of an increasingly global People's Liberation Army more broadly as a phenomenon that must be monitored, understood, and, where possible, addressed in all parts of the world.

The quality and quantity of Chinese security engagement with Latin America and the Caribbean has expanded substantially over the past 25 years, moving from the sale of military clothing and nonlethal equipment to the sale of military end items such as radar, fighter and transport aircraft, armored vehicles, and patrol ships to an increasingly broad set of partners. China's military institutional engagement has expanded to include an eight-year presence in the UN Stabilization Mission in Haiti; three visits to the region by the Chinese hospital ship *Peace Ark*; regular port calls, including participation in bilateral naval combat exercises; participation by PLA forces in the region's elite military training schools; and the hosting of Latin American defense personnel for courses of increasing length and sophistication, as explained later.⁶

For the People's Liberation Army, engagement in Latin America, as a subset of PLA global engagement, supports multiple national and institutional objectives. Building relationships with

5. ChinaPower Team, "How Will the Belt and Road Initiative Advance China's Interests?," ChinaPower (website), updated August 26, 2020, <https://chinapower.csis.org/china-belt-and-road-initiative/>; David Tweed, "China's New Silk Road," Bloomberg (website), April 16, 2019, <https://www.bloomberg.com/quicktake/china-s-silk-road>; and "Admiral Zheng He (1371-1433)," China Internet Information Center (website), accessed June 10, 2020, <http://www.china.org.cn/english/features/zhenhe/131897.htm>.

6. R. Evan Ellis, "Chinese Engagement in Latin America in the Context of Strategic Competition with the United States" (testimony, *The Chinese View of Strategic Competition with the United States, Before the US-China Economic and Security Review Commission*, June 24, 2020); China Military Online, "Chinese Naval Ship Visits Brazil on Global Voyage," *People's Daily Online* (website), May 19, 2015, <http://en.people.cn/n/2015/0519/c90786-8894454.html>; China Military Online (website), "PLAN's Taskforce Conducts Maritime Joint Exercise with Chilean Navy," *People's Daily Online* (website), October 14, 2013, <http://en.people.cn/90786/8424217.html>; Colombian security experts, interview by the author, 2018; and R. Evan Ellis, *Chinese Security Engagement in Latin America* (Washington, DC: Center for Strategic and International Studies, November 2020).

Latin American militaries is part of the construction of strong, comprehensive relationships with the countries of the region in support of the PRC's pursuit of economic, strategic, and other objectives. Arms sales and associated interactions involving technology sharing, including resolving product performance and support issues with Latin American partners, indirectly help the People's Liberation Army via Chinese commercial arms-producing companies to improve the quality and functionality of China's weapons and military systems in a range of global contexts. For the People's Liberation Army, such sales also strengthen relationships with Latin American and Caribbean armed forces.

Reciprocally, the ability of PLA personnel to be present in the region through military operations, institutional visits, training, and professional military education (PME) exchanges improves the personnel's familiarity with the operating environment in the region and Latin American partner institutions in support of the PLA strategic goal of operating as a global force. Indeed, the PLA defense strategy includes a pledge to continue traditional, friendly military ties with the country's Latin American military counterparts, among other aspects.⁷ In addition, these exchanges, complemented by the hosting of Latin American military officers in China for official visits or training and PME, create opportunities for Chinese intelligence to collect information on and potentially compromise partner-nation officials in support of future operations in the region or in an environment in which the People's Liberation Army may encounter Latin American militaries as either partners or opponents.

As it both expands its global commercial operations and comes increasingly into political and other conflicts with the United States, China may use the relationships, technical benefits, experiences, and other knowledge the country is gaining through its engagements in Latin America and the Caribbean in multiple ways. In the near term, the People's Liberation Army could be called upon to protect or evacuate its companies and nationals in the region, as the organization did in conjunction with Chinese commercial assets in Libya in 2011 and Yemen in 2015, among other instances.⁸

As its international obligations and influence expand in the region, the People's Liberation Army could also provide port security or conduct counterpiracy or other law enforcement operations in the region in support of Chinese companies and nationals operating there, as the organization has done in Africa. The People's Liberation Army could also be called upon to conduct joint operations against Chinese criminal groups operating in the region, as the organization did on a smaller scale in 2016 in Argentina in cooperation with that nation's police against the Chinese triad Pi Xiu. In addition, the People's Liberation Army could participate in a multinational peacekeeping operation

7. State Council Information Office of the PRC, "China's Military Strategy."

8. Royston Chan and Tom Miles, "CORRECTED – China Evacuates 12,000 from Libya, Sends Frigate to Help," Reuters (website), February 24, 2011, <https://www.reuters.com/article/libya-china-evacuations-idAFTOE71O00420110225>; and Megha Rajagopalan and Ben Blanchard, "China Evacuates Foreign Nationals from Yemen in Unprecedented Move," Reuters (website), April 3, 2015, <https://www.reuters.com/article/us-yemen-security-china/china-evacuates-foreign-nationals-from-yemen-in-unprecedented-move-idUSKBN0MU09M20150403>.

in the region, as the organization did in Haiti from 2004 to 2012, particularly in a country in which the security of Chinese companies and workers are a factor, such as South Sudan.⁹

In the context of large-scale hostilities (presumably beginning in Asia) with the United States or other major powers, PLA military relationships in and familiarity with the region could potentially be used in all stages of a global campaign. Such employment could include working through military relationships in conjunction with PRC political and economic leverage to convince the states in the region to support the Chinese position or to abstain from supporting the United States through voting in international bodies. Conceivably, the People's Liberation Army and other Chinese security and intelligence organs could leverage their acquired knowledge of the region to project operatives into Latin America to monitor the United States and its partner nations and to act covertly in the region to disrupt US deployment and sustainment flows.

Country Patterns in Security Engagement with the People's Republic of China

During the Cold War, a clear dichotomy existed between the military allies of the Soviet Union and those of the West. In Latin America and the Caribbean, no such distinction exists between countries that engage militarily with the People's Republic of China and those that engage with the West. Indeed, one of the two regimes in the Western Hemisphere that were led by a communist party for significant parts of the past half-century, the Sandinista regime in Nicaragua, did not diplomatically recognize the People's Republic of China until 1985. Although the Sandinista party leader returned to power in 2007, the party did not resume recognition of the People's Republic of China until December 2021. The other regime, Cuba's communist regime, established diplomatic relations with the People's Republic of China in 1959 shortly after coming to power, yet Cuba's broader political and economic relationship with China during the Cold War was mixed. Cuba, which sided with the Soviet Union against Chinese interests during the Cold War, has limited appeal to the People's Republic of China as a consumer market or commodity supplier.

Nonetheless, in understanding military relationships with the People's Republic of China, the region can be divided into four groups: anti-US communist and populist regimes, diversity-of-partner and in-transition regimes, diplomatically "off-the-table" regimes, and strongly US-allied regimes.

Anti-US Communist and Populist Regimes

The first category includes the de facto Nicolás Maduro regime in Venezuela; the Miguel Díaz-Canel government in Cuba; and, previously, Ecuador, Bolivia, and (to a lesser extent) Argentina. These countries, which are generally the leading purchasers of arms from Chinese companies, maintain relatively strong institutional relationships that include official visits, training, and PME

9. R. Evan Ellis, "Chinese Organized Crime in Latin America," *PRISM* 4, no. 1 (December 2012): 64–77; Alistair Thompson and David Gagne, "Power Vacuum Leads to Fighting among Chinese Mafias in Argentina," InSight Crime (website), February 28, 2017, <https://www.insightcrime.org/news/brief/power-vacuum-leads-to-fighting-among-chinese-mafias-in-argentina/>; Xinhua, "China Contributes to Haiti's Reconstruction After Natural Disasters," ReliefWeb (website), October 4, 2015, <https://reliefweb.int/report/haiti/china-contributes-haitis-reconstruction-after-natural-disasters>; and China Global Television Network Africa, "Chinese Peacekeepers Heading to South Sudan for One-Year Mission," China Global Television Network (website), November 19, 2019, <https://africa.cgtn.com/2019/11/19/chinese-peacekeepers-leave-for-south-sudan-on-one-year-mission/>.

exchanges. Anti-US regimes such as Venezuela and, previously, Ecuador and Bolivia have provided important opportunities for PRC-based arms suppliers to sell (and thus demonstrate the performance of) increasingly sophisticated military goods as Chinese companies have sought to move up the value chain of military products and to build relationships in the region. To date, the People's Republic of China has not openly sought to build on the willingness to engage of such regimes to establish permanent military facilities in the region or to host provocative activities, such as conducting exercises that have a clear anti-US orientation with the regimes.

In Venezuela, the leftist, populist regime of Hugo Chávez and his successor, Nicolas Maduro, was one of the first purchasers of Chinese military hardware in the region. Venezuela's purchase of Chinese Karakorum-8 light fighter-trainer jets was the first sale of Chinese combat aircraft to the region. Venezuela later discussed acquiring more capable L-15 Falcon fighter-trainers, but the country never made the purchase.¹⁰ The Chavez government went on to purchase Chinese Harbin Y-12 and Shaanxi Y-8 military transport aircraft, and the government was the first in Latin America to acquire PRC-made military radars, buying 10 JYL-1 systems in 2005 and another 26 radar in 2014.¹¹ Even in 2019, when Maduro was in the midst of an economic and political crisis, his government received Chinese-made air-defense radar—likely, JY-27As.¹² Venezuela has also acquired Chinese military ground vehicles, including VN-4 armored personnel carriers, for both its naval infantry and its national guard.¹³

Beyond military sales, Venezuela has regularly sent personnel to China for training and PME. In November 2017, Venezuela was one of the only Latin American states to send personnel to China's "Clear Sky" military exercise.¹⁴ Reciprocally, PLA personnel have participated in military parades in Venezuela and are reported to have deployed to the country to support the maintenance of Chinese-supplied military systems.¹⁵

10. Esteban Israel, "Venezuela to Spend \$82 Million on Chinese K-8 Jets," Reuters (website), June 6, 2010, <https://www.reuters.com/article/us-venezuela-china-planes/venezuela-to-spend-82-million-on-chinese-k-8-jets-idUSTRE65601P20100607>; and Dylan Malyasov, "Venezuela Has Ordered 24 L-15 Supersonic Trainer Aircraft," *Defence Blog*, October 23, 2015, <https://defence-blog.com/venezuela-has-ordered-24-l-15-supersonic-trainer-aircraft/>.

11. Lankan Ranger, "Venezuela Buying Chinese Y-12 Transport Planes," *Pakistan Defence* (blog), November 29, 2010, <https://defence.pk/pdf/threads/venezuela-buying-chinese-y-12-transport-planes.82425/>; "China entrega a Venezuela primeros aviones militares de transporte Y-8" [China delivers first Y-8 military transport planes to Venezuela], *El Universo* (website), November 15, 2012, <https://www.eluniverso.com/2012/11/15/1/1361/china-entrega-venezuela-primeros-aviones-militares-transporte-y-8.html>; and "Venezuela firma la compra de más radares chinos" [Venezuela signs for the purchase of additional Chinese radars], *Defensa* (website), April 24, 2014, <https://www.defensa.com/venezuela/venezuela-firma-compra-mas-radares-chinos>.

12. Carlos E. Hernández, "Venezuela recibe radares chinos de largo alcance" [Venezuela receives large-range Chinese radars], *Infodefensa.com* (website), September 27, 2019, <https://www.infodefensa.com/latam/2019/09/27/noticia-venezuela-recibe-radares-chinos-largo-alcance.html>.

13. Carlos E. Hernandez, "La Guardia Nacional de Venezuela aumenta su flota de vehiculos blindados chinos Norinco VN4" [Venezuela's National Guard augments its Chinese armored vehicle fleet with the Norinco VN4], *Infodefensa.com* (website), March 3, 2015, <https://www.infodefensa.com/latam/2015/03/03/noticia-guardia-nacional-venezuela-incorpora-vehiculos-blindados-chinos-norinco.html>.

14. Cui Jia, "PLA Plays to Its Strengths in War Games," *China Daily* (website), August 14, 2017, http://www.chinadaily.com.cn/china/2017-08/14/content_30573435.htm; and Fang Tian, "China to Hold International Airborne Troops Contest," *People's Daily Online* (website), July 28, 2017, <http://en.people.cn/n3/2017/0728/c90000-9248130.html>.

15. Xinhua, "Venezuela Celebrates 200th Independence Day," *People's Daily Online* (website), July 6, 2011, <http://en.people.cn/90001/90777/90852/7431051.html>; and Venezuelan security experts, interview by the author, July–September 2020.

In Ecuador, the prior anti-US government of Rafael Correa followed the lead of its ally Venezuela in acquiring Chinese military equipment, albeit on a more limited basis and with more significant problems. Acquisitions by the Correa government included negotiations for two Chinese Xian MA60 transport aircraft and a 2013 contract with the Chinese firm China Electronics Technology Group Corporation for a radar.¹⁶ The latter, however, became the subject of a legal dispute because the radar's aerial coverage performance did not meet the requirements the Ecuadorian Air Force had specified.¹⁷ The Correa government later acquired 709 Chinese military vehicles, including four-by-four and six-by-six trucks, buses, and other items, filling a significant need of the Ecuadorian military at the time for mobility assets. The Correa government also acquired 10,000 assault rifles from the People's Republic of China, among other equipment.¹⁸ Under Correa, Ecuador's military also sent forces to China for training, PME, and institutional engagements, but the military did not publicly host PLA forces on Ecuadorian soil.

Like Ecuador and Venezuela, Bolivia, under the leftist, populist government of Evo Morales, was a significant recipient of Chinese military equipment and a partner in military-to-military institutional visits, training, and PME. Bolivia's purchases, which predated the 2006 assumption of power by the leftist populist Morales, included HN-5 man-portable air defense munitions in the 1990s.¹⁹ From the beginning of the Morales regime, the Chinese regularly donated dual-use vehicles and military gear to Bolivia, culminating in the regime's turn to China in 2012 to purchase six Harbin H425 helicopters in a deal that led to a criminal investigation against the Bolivian officer who had signed it.²⁰ The Morales government subsequently acquired 31 Chinese armored cars and other military vehicles in 2016.²¹

In the case of Argentina, though civilian governments had limited funding to the military since the restoration of democracy in 1983, the leftist Peronist governments of Néstor Kirchner and his wife Cristina Fernández (who succeeded him) opened the door for the procurement of Chinese military equipment with the 2008 purchase of four Chinese WMZ-551 armored vehicles. The purchases were the result of a \$2.6 million contract, the purpose of which was to help to equip the Argentine

16. "Mas equipamiento para cuidar la frontera norte" [More equipment to guard the northern border], *El Comercio* (website), July 31, 2009, <https://www.elcomercio.com/actualidad/mas-equipamiento-cuidar-frontera-norte.html>.

17. "Empresa China CETC que vendió radares pide \$ 280 millones a Ecuador" [Chinese business CETC that sold radars asks Ecuador for \$280 million], *El Universo* (website), November 7, 2016, <https://www.eluniverso.com/noticias/2016/11/07/nota/5892721/empresa-que-vendio-radares-pide-280-millones-estado>.

18. "FF.AA. analizan usar los AK-47 de China para entrenamientos" [FF.AA. analyze using AK-47s from China for training], *El Comercio* (website), September 12, 2016, <https://www.elcomercio.com/actualidad/ffaa-analisis-ak47-china-ecuador.html>; and "Correa entrega 709 vehículos al Ejército" [Correa delivers 709 vehicles to the army], *La República* (website), April 7, 2015, <https://www.larepublica.ec/blog/2015/04/07/correa-entrega-709-nuevos-vehiculos-ejercito/>.

19. "Rodríguez: No autoricé salida de los misiles" [Rodríguez: I did not authorize the release of the missiles], *Correo del Sur* (website), March 16, 2017, https://correodelsur.com/seguridad/20170316_rodriguez-no-autorice-salida-de-los-misiles.html.

20. *El Deber*, "Denuncian a exautoridades por 'anomalías' en compra de 6 helicópteros" [Former authorities denounced for 'anomalies' in purchasing 6 helicopters], *El Deber* (website), November 21, 2018, https://eldeber.com.bo/1957_denuncian-a-exautoridades-por-anomalias-en-compra-de-6-helicopteros; and "Imputan a un general boliviano por la compra de helicópteros chinos para el Ejército" [Bolivian general charged for the purchase of Chinese helicopters for the army], *Infodefensa.com* (website), January 13, 2020, <https://www.infodefensa.com/latam/2020/01/13/noticia-imputan-general-boliviano-compra-helicopteros-chinos-ejercito.html>.

21. "China dona 31 vehículos militares a ejército de Bolivia" [China donates 31 military vehicles to the Bolivian Army], *La Prensa* (website), July 30, 2016, <https://www.laprensa.com.ni/2016/07/30/internacionales/2076219-china-dona-31-vehiculos-militares-a-ejercito-de-bolivia>.

battalion dedicated to the Argentine–Chilean peacekeeping brigade Cruz del Sur. Although the Argentine Army’s dissatisfaction with the vehicles helped to prevent a purchase of more vehicles, in 2015, the government of Fernández engaged in negotiations with the Chinese for 20 FC-1 *Xiaolong* fighter aircraft.²² Had the deal been completed, it would have been the most sophisticated PRC-made military aircraft sold to the region.²³ The military deals the Kirchner government negotiated with the Chinese also included armored vehicles and P18 offshore patrol vessels (OPVs).²⁴ The latter would have been only the second sale of a Chinese combat ship to the region following the delivery of an OPV to Trinidad and Tobago in 2015.²⁵ As other leftist, populist regimes have done, Argentina sent its military personnel to China for military courses and institutional exchanges and, in 2013, hosted two PLA Navy (PLAN) missile frigates for a port call after they made a historic crossing through the difficult seas of the Strait of Magellan.²⁶

The Cuban governments of Fidel and Raúl Castro and, most recently, Miguel Díaz-Canel have maintained regular military interactions with China. The PRC Minister of National Defense Wei Fenghe held talks with his Cuban counterpart in Beijing in November 2018, pledging to strengthen defense cooperation between the two countries.²⁷ In September 2019, the vice chairman of China’s Central Military Commission (CMC), General Xu Qiliang, received Cuba’s chief of staff, Lieutenant General Álvaro López Miera, and pledged an expansion of military exchanges.²⁸ Cuba has hosted Chinese forces, including port visits by PLA warships in January 2016 and the hospital ship *Peace Ark*.²⁹ Cuba also reportedly considered allowing China to use its Cold War signals intelligence collection facility at Lourdes.³⁰ Despite such robust engagement, China and Cuba arguably continue to experience minor friction over ideological leadership within their respective communist parties.

Cuba has not purchased significant amounts of military equipment from China, arguably reflecting the former’s lack of funds, its previous reliance on Russia for military hardware, and the

22. Guido Braslavsky, “La Fuerza Aérea descartó la compra de un caza chino” [The air force cancels the purchase of a Chinese fighter jet], *Clarín* (website), August 29, 2015, https://www.clarin.com/politica/fuerzas-armadas-recorte-agustin-rossi_0_r1GeqAQtdQg.html.

23. “Argentina negocia la compra de 20 poderosos aviones que podrían llegar a Malvinas” [Argentina negotiates the purchase of 20 powerful planes that could arrive at Malvinas], *Infobae* (website), February 15, 2015, <https://www.infobae.com/2015/02/15/1626950-argentina-negocia-la-compra-20-poderosos-aviones-que-podrian-llegar-malvinas/>.

24. “Analysis: China Looks to Break into Latin American Market via Argentina,” IHS Jane’s 360 (website), February 10, 2015, <http://www.janes.com/article/48872/analysis-china-looks-to-break-into-latin-american-market-via-argentina> (page discontinued); and “China to Supply Argentina Five “Malvinas Class” Offshore Patrol Vessels,” *MercoPress* (website), February 5, 2015, <https://en.mercopress.com/2015/02/05/china-to-supply-argentina-five-malvinas-class-offshore-patrol-vessels>.

25. “Chinese Vessel Coming to Trinidad,” *Jamaica Observer* (website), February 25, 2014, <http://www.jamaicaobserver.com/news/Chinese-vessel-coming-to-Trinidad>.

26. Agencies, “China, Brazil Holds Joint Naval Drill,” *Global Times* (website), October 29, 2013, <https://www.globaltimes.cn/page/201310/821136.shtml>.

27. Xinhua, “China, Cuba Pledge to Deepen Military Ties,” State Council of the PRC (website), updated November 24, 2018, http://english.www.gov.cn/state_council/state_councilors/2018/11/24/content_281476403871348.htm.

28. Li Jiayao, ed., “CMC Vice-Chairman Meets with Cuban Guest,” *China Military Online* (website), September 29, 2019, http://eng.chinamil.com.cn/view/2019-09/29/content_9639610.htm.

29. Chen Zhuo, ed., “A Look at China’s ‘Floating Hospital’ Peace Ark,” *China Military Online* (website), April 23, 2019, http://eng.mod.gov.cn/news/2019-04/23/content_4840098.htm.

30. “Russia with Plans for Military Bases in Nicaragua, Cuba and Venezuela,” *MercoPress* (website), February 27, 2014, <https://en.mercopress.com/2014/02/27/russia-with-plans-for-military-bases-in-nicaragua-cuba-and-venezuela>.

PRC desire to avoid alarming the United States because it perceives Cuba as a source of threats to US equities in the region.

Diversity-of-Partner and In-Transition Regimes

A range of countries in the region maintain some military engagement with the People's Republic of China without being ideologically committed to it and while working with the United States and other Western countries. Such a posture often reflects the countries' desire to maintain a diversity of relationships and global engagement beyond the hemisphere and the need for help in acquiring military equipment and capabilities, despite limited budgets.

The leading example of diversity-of-partner regimes is Peru. Peru has maintained good military relationships with the United States while purchasing Russian and Chinese equipment and engaging with both in other ways. In 2009, Peru's defense ministry considered, then abandoned, the acquisition of Chinese MBT-2000 tanks following public controversy that occurred when the vehicles were displayed in a military parade.³¹ Peru's armed forces have also received Beiben, Dong Feng, and Shaanxi Chinese military trucks, although they have had difficulties maintaining them.³² The most significant Peruvian acquisition of Chinese equipment, however, was its 2013 purchase of 40 Type-90B multiple rocket launch vehicles, of which only 27 were ultimately delivered.³³ In a parallel with the previously mentioned corruption investigation accompanying Bolivia's purchase of Chinese H-425 helicopters, the Peruvian Type-90B system purchase also led to a corruption investigation by that government's authorities.³⁴ As with most other governments in the region, the Peruvian Armed Forces have regularly sent personnel to China for institutional visits, training, and PME activities. In 2010, Peru conducted an exercise with the People's Liberation Army in conjunction with the former's receipt of a Chinese mobile field hospital.³⁵

Uruguay, under the left-center governments of Tabaré Vázquez and José Mujica, has maintained an active military and a political relationship with the People's Republic of China. China has donated cars, buses, tractors, and other dual-use vehicles to the Uruguayan defense ministry, including one \$5 million transaction in 2018, and the defense ministry was in negotiations with the Chinese

31. Editor, "Gobierno suspende indefinidamente compra del tanque chino MBT-2000" [Government suspends the purchase of Chinese MBR-2000 tank indefinitely], *Info región* (website), April 7, 2010, <https://www.inforegion.pe/53656/gobierno-suspende-indefinidamente-compra-del-tanque-chino-mbt-2000/>.

32. *China's Advance in Latin America and the Caribbean, Before the US House of Representatives Foreign Affairs Committee Subcommittee on the Western Hemisphere and Subcommittee on Asia and the Pacific*, 114th Cong. (2015) (statement of R. Evan Ellis, US Army War College professor of Latin American studies); and Peruvian security experts, interview by the author, 2015.

33. "Perú selecciona el sistema táctico de lanzacohetes múltiples Norinco tipo 90B" [Peru selects the Norinco 90B tactical system with multiple rocket launchers], *Maquina-de-Combate.com* (website), October 1, 2014, http://www.maquina-de-combate.com/blog/wp-content/cache/page_enhanced/maquina-de-combate.com/blog/peru-selecciona-el-sistema-tactico-de-lanzacohetes-multiples-norinco-tipo-90b/_index.html; and "Entrega de los lanzacohetes múltiples 90BM al Ejército de Perú" [Delivery of the 90BM rocket launchers to the Peruvian Army], *Defensa* (website), July 20, 2015, <https://www.defensa.com/peru/entrega-lanzacohetes-multiples-90bm-ejercito-peru>.

34. Peter Watson, "Nuevamente sistemas de armas chinos en juicio" [New Chinese arms systems in legal trial], *Infodefensa.com* (website), January 5, 2017, <https://www.infodefensa.com/latam/2017/01/05/noticia-nuevamente-sistemas-armas-chinos-juicio.html>.

35. "Ejércitos de Perú y China concluyen operación de acción humanitaria conjunta en Lima" [Peruvian and Chinese armies conclude joint humanitarian operation in Lima], *Andina* (website), November 30, 2010, <http://www.andina.com.pe/agencia/noticiaejercitos-peru-y-china-concluyen-operacion-accion-humanitaria-conjunta-lima330446.aspx>.

for a \$4.2 million warship, although the victory of center-right candidate Luis Lacalle Pou in the country's October 2019 elections stopped the deal.³⁶

Within the diversity-of-partner regimes, Brazil may be regarded as a special case. Under previous left-leaning governments, including the Workers' Party governments of Luiz Inácio Lula da Silva (2003–11) and Dilma Rousseff (2011–16), Brazil has maintained institutional and PME relationships with China, despite the traditionally conservative nature of the Brazilian military. Leading examples include attendance by PLA personnel at Brazil's internationally renowned Jungle Warfare School in Manaus and PLA visits to Brazil's highly regarded peacekeeping school, Centro Conjunto de Operações de Paz do Brasil (Brazilian Peace Operations Joint Training Center); China has shown interest in setting up or bolstering similar facilities in its homeland.³⁷ Brazil has also regularly sent personnel to short courses and longer programs at the command and general staff levels in China and has received visits on multiple occasions from Chinese ships.³⁸

Although Brazil has historically been careful to protect and nurture its military industry, PRC-based companies regularly participate in Brazil's Latin American Aerospace and Defence military trade show. In addition, PRC companies were briefly contenders to contribute to Brazil's Blue Amazon Management System, a coastal defense system commonly referred to as "SisGAAz," and the country's future navy frigate.³⁹

For over two decades, China has also been Brazil's partner in the China-Brazil Earth Resources Satellite program for developing and launching Earth-monitoring satellites. The program launched its sixth satellite into orbit in December 2019.⁴⁰ Under the more conservative governments of Michel Temer and Jair Bolsonaro, such collaboration has been more limited—particularly collaboration on acquisition—yet Sino-Brazilian institutional visits and personnel exchanges have continued.⁴¹

36. "China Has Donated Military Equipment to Uruguay," Army Recognition (website), March 29, 2018, https://www.armyrecognition.com/march_2018_global_defense_security_army_news_industry/china_has_donated_military_equipment_to_uruguay.html; "Uruguay negocia con China donación de una plataforma naval equivalente a 4,2 millones de dólares" [Uruguay negotiates the donation of a naval platform worth 4.2 million dollars from China], Uruguay Presidencia [Uruguay Presidency] (website), February 9, 2019, <https://www.gub.uy/presidencia/comunicacion/noticias/uruguay-negocia-china-donacion-plataforma-naval-equivalente-42-millones>; and Uruguayan security expert, interview by the author, October 2020.

37. Eben Blake, "Chinese Military Seeks Jungle Warfare Training from Brazil," International Business Times (website), August 10, 2015, <https://www.ibtimes.com/chinese-military-seeks-jungle-warfare-training-brazil-2046473>; Senior Brazilian defense officials, interview by the author, 2018; and Webmaster, "CCOPAB's Instructor Participates in Course in China," Brazil Peace Operations Joint Training Center (website), December 12, 2017, <http://www.ccopab.eb.mil.br/en/center-news/145-2017/985-ccopab-s-instructor-participates-in-course-in-china?highlight=WYJJaGluYSJd>.

38. R. Evan Ellis, *China-Latin America Military Engagement: Good Will, Good Business, and Strategic Position* (Carlisle, PA: Strategic Studies Institute, US Army War College Press, August 2011); China Military Online (website), "Chinese Naval Ship Visits Brazil on Global Voyage," China News Service (website), May 19, 2015, <http://www.ecns.cn/visual/2015/05-19/165906.shtml>; and Xinhua, "Chinese Navy Warships Pay Goodwill Visit to Brazil," China Internet Information Center (website), October 23, 2013, http://www.china.org.cn/photos/2013-10/23/content_30379276_2.htm.

39. Xinhua, "2015 LAAD Exhibition Held in Brazil," *Global Times* (website), April 16, 2015, <https://www.globaltimes.cn/content/917124.shtml> (page discontinued); Nelson Düring, "SisGAAz Exclusive—Three Main Contractors, Assemble!" Defesanet (website), January 28, 2015, <https://www.defesanet.com.br/sisgaaaz/noticia/18064/SisGAAz-Exclusive-%E2%80%93-Three-Main-Contractors--assemble-/>; Brazilian defense industry personnel, interview by the author, 2018; and R. Evan Ellis, "The Future of Brazil-China Relations in the Context of COVID-19," *Global Americans* (website), September 18, 2020, <https://theglobalamericans.org/2020/09/the-future-of-brazil-china-relations-in-the-context-of-covid-19/>.

40. Ellis, "Future of Brazil-China Relations."

41. Senior Brazilian defense experts, interview by the author, 2018–20.

As with Brazil, Peru, and Uruguay, many nations of the Caribbean send their personnel to military courses in China and receive donations of equipment for their military and police forces while maintaining positive and active security engagement with the United States. Notable examples include China's sale of an OPV to Trinidad and Tobago in 2014, a donation of construction equipment to the Guyana Defence Force in 2017, and a donation of \$1.1 million in nonlethal gear to the Jamaica Defence Force in 2011.⁴² Donations of goods to Caribbean police forces by the People's Republic of China include \$2.6 million in vehicles given to the Guyana Police Force in 2017 and 200 motorcycles provided to the Trinidad and Tobago Police Service in 2019.⁴³

In some cases, the mixture of defense partners also reflects the legacy purchases or relationships of prior governments that made different decisions about with whom to work or from whom to acquire equipment. In Ecuador, the 709 military vehicles acquired under the prior Correa regime were delivered in part during the administration of Correa's more pro-US successor, Lenín Moreno.⁴⁴ In Argentina, negotiations during the leftist, populist administration of Cristina Fernández de Kirchner for fighter aircraft, armored vehicles, and OPVs were terminated by the pro-US administration of Mauricio Macri, which came to power in December 2015. Nonetheless, the return to power of the leftist Peronist party in December 2019, including Fernández returning as vice president, has created an opening to reexplore these previously established relationships.

Diplomatically "Off-the-Table" Regimes

The eight governments in the region that do not diplomatically recognize the People's Republic of China, including Paraguay, Guatemala, Honduras, Belize, Haiti, St. Kitts and Nevis, St. Vincent and Grenadines, and Saint Lucia, by default, do not conduct military exchanges with the Chinese, receive PLAN ships or other operational units, or acquire PRC military equipment.

An important exception to the absence of military interactions with these regimes occurred in Haiti, which from 2004 to 2012 received PLA military police and other military personnel as part of the UN Stabilization Mission in Haiti peacekeeping force.⁴⁵ The deployment was technically not a direct military interaction between the People's Republic of China and the Haitian government because the latter does not recognize the former.

42. "Chinese Vessel Coming"; "China's Army Donates \$1.2B in Equipment to GDF," *Stabroek News* (website), April 4, 2017, <https://www.stabroeknews.com/2017/04/04/news/guyana/chinas-army-donates-1-2b-equipment-gdf/>; and *Caribbean Journal* Staff, "Jamaica, China Sign Military Aid Pact," *Caribbean Journal* (website), August 22, 2011, <https://www.caribjournal.com/2011/08/22/jamaica-china-sign-military-aid-pact/>.

43. "Force Vehicles Donated by Chinese Gov't 'in Order,'" *Stabroek News* (website), November 8, 2018, <https://www.stabroeknews.com/2018/11/08/news/guyana/force-vehicles-donated-by-chinese-govt-in-order/>; and News Desk, "Police Get 200 Motorcycles from China," *Trinidad and Tobago Guardian* (website), August 22, 2019, <http://www.guardian.co.tt/news/police-get-200-motorcycles-from-china-6.2.914424.9562095eb4>.

44. Ecuadorian defense officials, interview by the author, 2017–18.

45. Ellis, *Chinese Engagement*.

Strongly US-Affiliated Regimes

A small but important number of governments in the region with close relationships with the United States more significantly limit their purchases of military equipment from and other interactions with China, in large part to avoid harming their relationships with the United States. Countries in this category include Chile and Colombia.

Chile, whose military has historically been well funded and has featured some of Latin America's most capable military equipment, has traditionally not purchased major Chinese end items. Chile has conducted institutional exchanges with the People's Liberation Army and sent its officers to courses in China as part of maintaining a force with a diverse, international orientation. Chile has also been one of the few countries in the region to conduct naval combat exercises with the Chinese, holding a small activity in conjunction with two visiting Chinese missile frigates in 2013.⁴⁶ Chile also briefly had Chinese-language instructors in its strategic-level military institution, Academia Nacional de Estudios Políticos y Estratégicos (commonly referred to as "ANEPE"), although the practice has been discontinued.⁴⁷

Since the initiation of strong American-Colombian security cooperation under Plan Colombia in 2000, Colombian governments have avoided purchasing significant, PRC-made, military end items. Nonetheless, the nation's armed forces averaged roughly \$1–\$7 million per year in donations from the People's Republic of China in the early 2000s, including \$3 million in military bridging equipment in 2013.⁴⁸ In addition, in 2013, Colombia accepted the delivery of three Chinese Harbin Y-12E military transport aircraft that the country used to support the Colombian Air Force-operated SATENA airline, although the aircraft were ultimately removed from service five years later over questions about the structural integrity of the aircraft.⁴⁹ In addition, Colombia has also sent its officers to military courses in China, including the full, five-year program of the PLA military academy.⁵⁰ Furthermore, Colombia has also brought PLA soldiers into its Lancero special forces course, although such invitations have been discontinued.⁵¹

General Patterns and Tendencies

Though no standard model for PRC interactions within Latin America or its subregions exists, the People's Liberation Army and Chinese military product companies have followed certain principles.

46. China Military Online (website), "Taskforce Conducts."

47. Chilean security experts, interview by the author, 2019

48. Ellis, *Military Engagement*; and "Mindefensa recibió puentes militares de China evaluados en 3 millones de dólares" [Ministry of Defense received military bridges from China valued at 3 million dollars], *El Espectador* (website), October 12, 2013, <https://www.elespectador.com/noticias/judicial/mindefensa-recibio-puentes-militares-de-china-avaluados-articulo-452101>.

49. "Satena recibirá tres aviones Harbin Y-12 de fabricación China," *Volavi* (website), April 16, 2013, <https://volavi.co/aviacion/noticias/satena-recibira-tres-aviones-harbin-y-12-de-fabricacion-china>; and Colombian security expert, interview by the author, 2019.

50. Colombian security expert, interview by the author, 2017; and R. Evan Ellis, "China's Security Challenge to the United States in Latin America and the Caribbean," in *China, the United States, and the Future of Latin America*, ed. David B. H. Denoon (New York: New York University Press, 2017), 341–70.

51. Colombian security experts, interview by the author, 2018.

Although the People's Liberation Army has conducted security engagement with virtually all of Latin America and the Caribbean, the former has shown interest in the Caribbean Basin (strategically proximate to the United States)—interest that is arguably disproportionate to the basin's market potential or natural resources. As noted previously, the first PRC sale of a major combat ship in the region was in 2014 to Trinidad and Tobago, and the Chinese have made regular donations of equipment to both the Caribbean's militaries and its police forces.⁵²

As in strategically valued, nondefense sectors, the People's Liberation Army and Chinese defense industries have competed on a price basis in the sale of unsophisticated goods, such as military clothing and protective gear, to establish experience and relationships in the sector. The military and the industries then leverage their experience and relationships to improve their product and expand their offerings to more sophisticated items. As noted previously, the Chinese have often used donations of equipment, including dual-use vehicles such as buses and trucks, to build relationships and to move into new product areas. Such donations have played an important role among security forces with limited resources, such as those in the Caribbean. Donations have also provided a useful way to introduce pro-US governments such as Colombia (who might not otherwise buy Chinese equipment) to the PRC military product offerings and to relations with PLA defense officials. Such donations have gone to both traditional military forces and police and other security forces.

Like their commercial product-focused counterparts, Chinese companies producing military products have become increasingly active in the region. In recent years, these companies have expanded their presence and the sophistication of their offerings at military trade shows, such as FIDAE in Chile, Latin American Aerospace and Defence in Brazil, and SITDEF PERU in Peru.⁵³ Two separate Chinese delegations came to the Chilean Navy-oriented trade show Exponaval in 2018.⁵⁴ Chinese companies have also shown sophistication in their legal and contractual maneuvering in the region, including protesting lost bids to block awards by opponents, as the companies did in 2012 over an air defense system in Peru.⁵⁵

The People's Republic of China has brought defense personnel to China from virtually all countries with which it maintains relationships in the Caribbean Basin for courses ranging in length from days to a year or longer.⁵⁶ In sending its personnel to the region, the People's Republic of China has concentrated on the unique and respected institutions that present significant opportunities for PLA learning, regardless of strategic geography or political alignment. In recent years, these institutions have included the School of Lanceros, a special warfare school in Colombia; the

52. "Chinese Vessel Coming."

53. China Xinhua Español, *China participa por primer vez en FIDAE en Chile* [China participates in FIDAE in Chile for the first time] (Beijing: CNC World, 2016), YouTube video, <https://www.youtube.com/watch?reload=9&v=0kZBCKL2BQg>; Xinhua, "2015 LAAD Exhibition"; and "Expositores chinos en el SITDEF 2013," *Poder Militar* (blog), May 2013, <https://podermilitar.blogspot.com/2013/05/expositores-chinos-en-el-sitdef-2013.html>.

54. Chilean defense expert, interview by the author, 2019.

55. Kelly Hearn, "China-Perú Military Ties Growing Stronger," *Washington Times* (website), May 27, 2012, <https://www.washingtontimes.com/news/2012/may/27/china-peru-military-ties-grow-stronger/>.

56. Ellis, *Military Engagement*.

Brazilian Jungle Warfare School in Manaus; and Brazil's peacekeeping institution, the Brazilian Peace Operations Joint Training Center.⁵⁷

In military deployments in the region and military sales, the People's Liberation Army has shown a disproportionately large interest in the Caribbean Basin relative to its portion of the hemisphere's population, resources, and markets. The only PLA peacekeeping deployment to the region, which provided military police and others to the UN Stabilization Mission in Haiti from 2004 to 2012, and all three visits by the PLA hospital ship *Peace Ark* (2011, 2015, and 2018–19), involved the Caribbean.⁵⁸

The People's Liberation Army has also expanded engagement with law enforcement entities in Latin America and the Caribbean. China's interest in "judicial and police cooperation" was mentioned in its 2008 and 2016 Latin America policy white papers.⁵⁹ The country's interest in working more closely with the region to fight organized crime and corruption was set forth in the 2019–21 joint plan between China and the Community of Latin American and Caribbean States.⁶⁰ The expanding presence of PRC-based companies in the region has reinforced this trend by giving the Chinese government a vested interest in security conditions on the ground that would potentially affect PRC operations and personnel and increase the importance of ties to local law enforcement.⁶¹

At the same time, for Latin America and the Caribbean, increasing transpacific organized crime, including the flow of drugs, precursor chemicals, and human trafficking from the People's Republic of China as well as trade-based and other money laundering in which Latin American criminal organizations involve Chinese partners and institutions, has created incentives for Latin American governments to expand work with their Chinese counterparts.⁶² Collaboration between the People's Republic of China and the government of Argentina against Chinese triad organizations has been one of the more public examples of such assistance.⁶³

Beyond official ties between Chinese and Latin American security forces, as PRC-based companies expand their presence, particularly in relatively dangerous areas, the companies are increasingly working with local private-security companies. Chinese security companies, often formed by former PLA members, are also seeking to leverage personal and business ties to Chinese companies to support them in their overseas operations.⁶⁴ Currently, some 30 Chinese security

57. Senior Colombian defense official, interview by the author, 2016; Blake, "Chinese Military Seeks"; and Senior Brazilian defense officials, interview by the author, 2018.

58. Ellis, *Chinese Engagement*.

59. State Council of the PRC, "China's Policy Paper."

60. Community of Latin American and Caribbean States and the PRC, *CELAC and China Joint Plan of Action for Cooperation on Priority Areas (2019–2021)* (Albany, NY: Community of Latin American and Caribbean States, January 2018).

61. R. Evan Ellis, *China on the Ground in Latin America: Challenges for the Chinese and Impacts on the Region* (New York: Palgrave Macmillan, 2014).

62. Valentina Pop, "Mexican Cartels Are Now Cooking Chinese Chemicals in Dutch Meth Labs," *Wall Street Journal* (website), December 8, 2020, <https://www.wsj.com/articles/mexican-cartels-are-now-cooking-chinese-chemicals-in-dutch-meth-labs-11607430794>; and Ellis, "Chinese Organized Crime."

63. Xinhua, "China-Argentina Security Cooperation Helps Reduce Crime," China Internet Information Center (website), June 22, 2016, http://www.china.org.cn/world/2016-06/22/content_38717054.htm.

64. Sergey Sukhankin, "Chinese Private Security Contractors: New Trends and Future Prospects," *China Brief* 20, no. 9 (May 2020): 18–24.

companies operate overseas, although to date these operations have occurred more frequently in Asia and Africa than they have in Latin America and the Caribbean.⁶⁵

Recognizing the diversity of actors involved in Chinese security engagement in the region is also important. As noted previously, these actors have included official personnel, such as Chinese defense attachés; military institutional contacts generally coordinated through the Chinese government and its embassy; Chinese commercial defense companies; and, most recently, Chinese security companies. The level of coordination and distinctions among these actors are subjects for further study.

Although China's advance in Latin America is often associated with US neglect of the region, support for this common hypothesis in the present analysis is mixed.⁶⁶ As noted previously, those most disposed to engage with the People's Republic of China have been governments deliberately seeking to forge a path independently from the United States or to diversify options. Regimes more sensitive to good relations with the United States limited major cooperation with Beijing when the Trump administration made PRC engagement an issue, suggesting previously, the lack of a clear cost for military engagement with China may have played an enabling role. Yet, no evidence indicates governments in the region increased military engagement with China because of a lack of military aid or other engagement from the United States.

The Impact of COVID-19 and the Evolving Strategic Environment

The COVID-19 pandemic has the potential to expand Chinese security engagement in Latin America and the Caribbean, albeit indirectly and with some delay.⁶⁷ The pandemic will create opportunities for PRC-based companies to expand their commercial presence in the region, with Chinese demand for the region's commodities and agricultural exports increasing in relative importance due to the Chinese economy's positive growth in 2020, while Latin America's traditional markets, such as the United States, the EU, and certain parts of Latin America, have continued to suffer.⁶⁸ Financially healthy Chinese firms, backed by financial institutions with money to lend, may similarly have expanded opportunities to buy the Latin America-based assets of international companies selling their Latin American holdings to shore up their financial positions and pursue opportunities in more attractive markets (such as Asia). Preliminary evidence these firms are buying Latin American assets includes State Grid Corporation of China's \$3 billion acquisition in

65. Christopher Spearin, "China's Private Military and Security Companies: 'Chinese Muscle' and Reasons for US Engagement – Analysis," *Eurasia Review* (website), July 7, 2020, <https://www.eurasiareview.com/07072020-chinas-private-military-and-security-companies-chinese-muscle-and-reasons-for-us-engagement-analysis/>; and Jonas Parello-Plesner and Mathieu Duchatel, *China's Strong Arm* (London: Routledge, 2015).

66. Tom Phillips, "While Trump Eyes Latin America with Malign Neglect, China Sees Opportunity," *Guardian* (website), February 9, 2018, <https://www.theguardian.com/world/2018/feb/08/latin-america-china-us-trump>.

67. R. Evan Ellis, "COVID-19 acelerará avance de China en un mundo más desconfiado: Proyecciones para América Latina" [COVID-19 accelerates the advance of China in an increasingly distrustful world: Implications for Latin America], *Red China y América Latina* (website), June 1, 2020, <http://chinayamericalatina.com/covid-19-acelerara-avance-de-china-en-un-mundo-mas-desconfiado-perspectivas-para-america-latina/>.

68. Saheli Roy Choudhury, "Ex-Goldman Economist Jim O'Neill Says China's Economy 'Well on the Way' to Recover from Coronavirus," *CNBC* (website), September 21, 2020, <https://www.cnn.com/2020/09/21/china-economy-is-on-the-way-to-recovering-from-covid-19-jim-oneill.html>; and Sergei Klebnikov, "Economists Warn US GDP Won't Recover to Pre-Pandemic Levels until 2022," *Forbes* (website), August 24, 2020, <https://www.forbes.com/sites/sergeiklebnikov/2020/08/24/economists-warn-us-gdp-wont-recover-to-pre-pandemic-levels-until-2022/#2f4cd3825078>.

November 2020 of the energy company Naturgy in Chile and China Communications Construction Company's acquisition of a 30 percent stake in the Portuguese company Mota-Engil, which maintains a strong presence in Latin America.⁶⁹

The combined result will likely be an expansion of Chinese companies in the region, with an associated increase in Chinese personnel and operations there being exposed to the region's expanding public security challenges. To this end, these companies will likely face an environment with increased levels of criminal insecurity, social unrest, and, possibly, greater resentment toward the Chinese due to the perceptions of some that China contributed to the pandemic.⁷⁰ The postpandemic environment may thus generate incidents that result in increased PRC attention to conditions in the region and expanded police, private-sector, and even military security cooperation. The postpandemic environment could even generate the requirement for a PLA-supported, noncombatant evacuation operation, as occurred previously in Libya and Yemen.⁷¹

Implications

Although the engagement of Chinese security forces and police in the region, as of 2021, is limited in scope, the contribution of the forces and police to a People's Liberation Army with increasingly global capabilities and the relevance of these forces and police in the undesirable context of a future war involving the United States and China are undeniable. Moreover, from a US standpoint, the maintenance of security access to the region and the denial of this access to potential adversaries are functions of political relationships and the economic and other nonmilitary factors that can influence the relationships. As the Chinese commercial presence in the region continues to expand in the post-COVID-19 environment, the potential threat to US access will only grow, regardless of how well the United States performs its security assistance and other security engagement roles.

For those charged with preparing for tomorrow's security challenges, the time to begin preparing for a world in which the United States can no longer treat the Western Hemisphere as a sanctuary is today.

69. Reuters Staff, "Naturgy Sells Chilean Unit to China's State Grid for \$3 Billion," Reuters (website), November 13, 2020, <https://www.reuters.com/article/us-naturgy-m-a-cge/naturgy-sells-chilean-unit-to-chinas-state-grid-for-3-billion-idUSKBN27T1A6>; and Mat Youkee, "Chinese Expansion with a Portuguese Face," *Diálogo Chino* (website), November 20, 2020, <https://dialogochino.net/en/infrastructure/38445-cccc-mota-engil-chinese-expansion-with-a-portuguese-face/>.

70. R. Evan Ellis, "COVID-19: Shaping a Sicker, Poorer, More Violent, and Unstable Western Hemisphere," Strategic Studies Institute (website), May 15, 2020, https://ssi.armywarcollege.edu/wp-content/uploads/2020/05/COVID-19-Unstable-West-Hem_Ellis_v2.1_post.pdf.

71. Chan and Miles, "China Evacuates"; and "Yemen Crisis: China Evacuates Citizens and Foreigners from Aden," *BBC News* (website), April 3, 2015, <https://www.bbc.com/news/world-middle-east-32173811>.

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The People's Liberation Army and Operational Access in the Indian Ocean Region: Geographic Constraints and Lessons from the Cold War

David Brewster

Introduction

This chapter examines challenges faced by the People's Liberation Army (PLA) in obtaining operational access to the Indian Ocean region (IOR). The chapter is divided into three sections. The first section reviews constraints on and challenges to extraregional powers' operational access to the IOR as a result of its geography. The second section provides a case study of the Soviet military presence in the IOR during the Cold War, focusing on how this presence was molded by Soviet strategic imperatives and geographic constraints. The third section examines the challenges the People's Liberation Army is facing in gaining operational access to the region. The author would like to thank Olivia Truesdale for her assistance in conducting research for this chapter.

This chapter does not examine the PLA's operational access to the IOR by attempting to discern China's current intentions. Instead, it focuses on how China's strategic imperatives may drive the army's future presence, bearing in mind the geographic constraints particular to the region and the Soviet experience during the Cold War. The chapter considers operational access in the land, sea, and air domains but not the space or cyber domains.

The chapter arrives at the following key conclusions.

- The People's Liberation Army faces major geographic challenges in gaining operational access to the IOR for naval, air, and land forces.
- The imperative to secure local bases and assured access with local partners is an important driver in China's political, economic, and security relationships in the region.
- Mitigation strategies exist in case of unavailability of onshore naval logistical support.
- Amphibious and noncombatant vessels will be valuable to the People's Liberation Army in extending regional influence.

- Geographic constraints, including overflight restrictions and access to local airfields for basing and staging, hamper the PLA's air-power access.
- The size and composition of the People's Liberation Army's future presence in the IOR are not ordained. The size and composition will ultimately be a function, inter alia, of China's interests in the region.

Geographic Constraints on Military Operational Access to the IOR

The physical geography of the Indian Ocean has a significant effect on the strategic dynamics of the region, including operational access by extraregional military forces.¹ The ocean is largely enclosed on three sides. Other bodies of water offer few maritime entry points, and the ocean features vast stretches of water that contain few islands. The Great Himalaya mountain range, which spreads along the southern rim of the Eurasian continent, also cuts off much of the Eurasian hinterland from easy access to the sea.

The land domain contains an unusual scarcity of overland pathways between the Eurasian hinterland and the Indian Ocean littoral. Indeed, until well into the twentieth century, no major transport routes—roads, railways, or rivers—connected the ocean with the continental hinterland. This disconnect has long made gaining physical access to the Indian Ocean difficult for major, nonlittoral powers, such as China and Russia. Historically, this disconnect has led to these powers being economically and politically oriented away from the Indian Ocean and has severely limited their presence and influence in the region. Indeed, the physical limitations on access to the Indian Ocean by land have meant no continental Eurasian power has ever militarily dominated the IOR.

In the maritime domain, the semi-enclosed geography of the Indian Ocean creates a premium for powers that control the choke points of entry into the ocean from the Pacific Ocean, Atlantic Ocean, and Mediterranean Sea. A power that can control access to the limited number of deepwater ports in the IOR can also deny essential logistical support to rival maritime powers.

These considerations have molded naval strategy in the Indian Ocean for around 500 years. The Portuguese adventurer and imperialist Afonso de Albuquerque first used a maritime choke-point strategy in the fifteenth century to transform the Indian Ocean into a *mare clausum* (or closed sea) over which Portugal had exclusive jurisdiction. When Britain gained control of the Indian Ocean in the early nineteenth century, the country followed a similar strategy, seizing the key oceanic choke points at the Strait of Malacca and South Africa and on the Red Sea. Britain's control of most of the Indian Ocean littoral prevented rivals from establishing naval bases in the region, ensuring the Indian Ocean could be controlled by the country essentially as an enclosed maritime space. The United States, which has been the predominant power in the Indian Ocean since the late 1970s, has also sought to exclude its competitors.

1. David Brewster, "Silk Roads and Strings of Pearls: The Strategic Geography of China's New Pathways in the Indian Ocean," *Geopolitics* 22, no. 2 (2017): 1–23.

Analogous constraints exist in the air domain. The IOR is a huge oceanic space with few islands, making access to local airfields for staging and logistical support essential. The noncontiguity of China with the Indian Ocean also means Chinese military aircraft can access international airspace in the IOR from home territory only by transiting sovereign airspace, which requires host-country consent. (“Sovereign airspace” corresponds to the airspace above sovereign territory, including territorial waters. International airspace is not under the control of any state. The 1944 Chicago Convention on International Civil Aviation facilitates overflight of sovereign airspace by commercial [but not military] aircraft, although China and Russia are not parties to the convention.) Overflights of sovereign territory are subject to tracking and interdiction, and the refusal of countries to grant overflight rights can create significant operational problems. For example, in 1986, France and Spain refused overflight rights to the United States for air strikes on Libya, meaning US strike aircraft based in Britain could only fly over international waters from air bases in Britain, including through the Strait of Gibraltar.² For these reasons, the contest for airpower access to the IOR in many ways parallels contests for access to naval ports.

Soviet Military Operational Access to the IOR during the Cold War

This section provides a case study of the Soviet Union’s operational access to the IOR during the Cold War. The experience of the Soviet Union as a major Eurasian continental power without direct access to the Indian Ocean provides interesting similarities to the constraints faced by China today.

Soviet Strategic Imperatives in the Indian Ocean

During the Cold War, the Soviet Union generally regarded the Indian Ocean as a theater of secondary importance in comparison to Europe and the western Pacific. Up until the late 1960s, the IOR was dominated by Britain through its administration of colonial territories and the presence of the Royal Navy. Only following decolonization and the withdrawal of most British military assets from east of Suez, announced in early 1968, did the Soviet Union demonstrate any substantive military interest in the region. In the following years, the Soviet Union developed a large naval presence in the Indian Ocean in competition with the United States.

Soviet strategic imperatives in the IOR differed considerably from those of the United States throughout the Cold War. The strategic imperatives evolved somewhat over time, but they included:

- restricting or preventing the United States from using the Indian Ocean as a base for conducting nuclear strikes against Soviet territory;
- ensuring the security of sea routes through the Indian Ocean, including the year-round sea route connecting the Soviet ports in Europe with East Asia;

2. Robert E. Harkavy, *Bases Abroad: The Global Foreign Military Presence* (Oxford, UK: Oxford University Press, 1989), 95.

- posing a limited threat to US energy supplies and the movement of US forces into the region;
- providing seaborne support for Soviet activities in space, including tracking and seaborne recovery;
- extending Soviet political influence among the newly independent Indian Ocean states and support for national liberation movements;
- supporting the Soviet fishing fleet against seizure or harassment; and
- gaining sailing experience in distant waters under different climatic conditions.³

Strategic competition between the Soviet Union and the United States in the IOR waxed and waned throughout the 1970s. The fall of the shah of Iran and the Soviet invasion of Afghanistan in 1979 heightened competition between the two superpowers. But Soviet strategic imperatives remained limited, and the missions of the Soviet fleet were quite different from those of the US Navy. Overall, the United States and its allies were largely successful in containing the Soviet military's presence and role in the IOR.

Development of the Soviet Military Presence in the IOR

This section discusses the development of the Soviet military presence in the IOR in the maritime, air, and land domains.

Constraints on Soviet Naval Access

The Soviet Navy was subject to significant geographic constraints on operational access to the IOR, including extreme distances from home territory or bases under full Soviet operational control; the need to access the region through narrow choke points, which facilitated tracking and interdiction by the United States and its allies; and imperatives to develop local logistical support facilities from often politically unreliable partners.

Although it was a major Eurasian power, the Soviet Union had no direct access to the Indian Ocean and few reliable partners in the region. As a result, the Soviet Navy was forced to deploy to the Indian Ocean principally from ports on the Soviet Union's Pacific coast (Vladivostok and Avacha Bay) and from Cam Ranh Bay, Vietnam (starting in 1979). Access from the Pacific Ocean involved transiting the narrow straits through the Indonesian Archipelago, where vessels were subject to interdiction and tracking. (Starting in 1981, Australia assumed primary responsibility for tracking Soviet vessels transiting the Strait of Malacca.) Geography placed even greater constraints on access from Soviet-controlled ports in the European theater, which involved transiting the Suez Canal (which was closed between 1967 and 1976) or undertaking the lengthy journey around Africa.

3. A. Ladozhsky, "The U.S.S.R.'s Efforts to Turn the Indian Ocean into a Zone of Peace," *International Affairs* 7 (1981): 44; and Thomas McClintock Price, "Soviet-Indian Relations and the Indian Ocean Zone of Peace" (master's thesis, US Naval Postgraduate School, 1981).

These constraints had a significant impact on the size and composition of the Soviet fleet deployed to the Indian Ocean. The three-week transit time from Vladivostok to the Gulf of Aden meant keeping one combatant vessel on station (with an average deployment of five months) and required ships to spend approximately four months per year in transit for each ship-year of deployment. Long transits from home ports also impeded the easy deployment of small patrol ships and frigates to the Indian Ocean.⁴

The distances from home ports created significant logistical issues. More than 50 percent of Soviet vessels deployed to the Indian Ocean were support and other auxiliary vessels. Logistical considerations may have constrained operations in the theater, meaning Soviet ships spent relatively long periods at anchor.⁵

These challenges created strong imperatives to obtain local bases or assured access to support facilities that could provide home basing, logistical support, and support in communications, electronic intelligence collection, and aerial reconnaissance. From the mid- to late 1970s, the Soviet Navy was successful in developing several naval support facilities in or near the Horn of Africa: at Aden, South Yemen (now Yemen); at Berbera, Somalia; and at Massawa, Ethiopia (now Eritrea). Where onshore support was not available, the Soviets relied on support vessels anchored in floating bases in international waters, including near the island of Socotra in Yemen, near the Comoro Islands, west of Diego Garcia, and near Mauritius.

This quest for access was pursued opportunistically and largely secured through offering military assistance to host governments, rather than relying upon ideological alignments. The ad hoc nature of the arrangements meant the Soviets had to rely on politically unstable governments; as a result, the Soviets' access rights were far from guaranteed. The Soviet Navy was evicted from Somalia in 1977, and Soviet facilities in neighboring Ethiopia came under attack from local insurgents on several occasions. Concerns about the reliability of local partners often led the Soviets to use portable equipment, such as floating piers, storage tanks for water or fuel, and floating dry docks that could be moved elsewhere if required.⁶

Moscow was not successful in establishing Soviet-controlled naval support facilities elsewhere in the IOR, including in the southwestern, central, and eastern Indian Ocean. Despite hopes the 1971 Indo-Soviet Treaty of Peace, Friendship, and Cooperation would lead to bases in India, the Soviet Navy only gained limited access to Indian ports. Beyond the Horn of Africa area (and Iraq in the Persian Gulf), the Soviet Navy was forced to rely on limited logistical support, made available on a commercial basis in Singapore, Seychelles, India, and elsewhere. Although some Western analysts argued the Soviet intervention in Afghanistan was motivated by ambitions to build a naval port at Gwadar, Pakistan, no evidence supports this contention.

4. Philip S. Gillette and Willard C. Frank, eds., *The Sources of Soviet Naval Conduct* (Lanham, MD: Lexington Books, 1990), 257.

5. CIA, *DDCI Briefing: Soviet Naval Presence in the Indian Ocean* (Langley, VA: CIA, May 7, 1975).

6. Gillette and Frank, *Soviet Naval Conduct*, 267.

Development of the Soviet Naval Presence in the IOR

Prior to 1968, the Soviet military had no substantive military presence in the IOR. Until the 1960s, Britain was the predominant power in the region, administering most of the territories there, with the Royal Navy dominating the seas. Britain's 1968 announcement of the withdrawal of most of its military forces from east of Suez, however, created a power vacuum the Soviet Union sought to fill. Within several months, the Soviet Navy made its first substantive foray into the IOR with a flotilla of four ships deployed from Vladivostok.

Over the following decades, the Soviet naval presence generally grew in response to certain events. Naval activity increased between 1972–75 because of the 1973 Yom Kippur War between Arab and Israeli forces and the subsequent oil embargo imposed by the Organization of the Petroleum Exporting Countries. Next, the Soviet presence declined for several years, and then it rose again beginning in 1979 in response to simultaneous crises in Iran and Afghanistan. The number of days spent by Soviet naval ships in the Indian Ocean in 1968, 1974, and 1980 are presented in table 4-1.⁷

Year	Total Ship Days	Average Ships per Day
1968	1,200	3
1974	10,500	29
1980	11,800	32

Table 4-1. Number of days spent by Soviet naval ships in the Indian Ocean

For much of the 1970s, the total number of Soviet ship-days in the Indian Ocean (more specifically, the number of ships multiplied by their length of presence) exceeded that of the US Navy, providing the Soviet Navy with local and temporary naval superiority, particularly in the lower Red Sea area. The large presence of Soviet ships may have also reinforced Soviet political influence in the Horn of Africa and, possibly, with important regional players, such as India and Saudi Arabia. Arguably, Saudi Arabia's "vacillating" regional policy in the late 1970s was influenced by Soviet naval strength in its vicinity.⁸ The Soviet Navy, however, did not achieve meaningful and lasting naval superiority across the region. The naval balance in favor of the Soviet Union was quickly reversed in times of crisis, such as the Indo-Pakistani War of 1971, the 1973 Yom Kippur War, and the 1978–79 Iranian Revolution, when US naval forces were surged into the Indian Ocean at short notice.⁹

The composition of the Soviet fleet in the Indian Ocean also differed considerably from that of the US fleet, which was often based around carrier strike groups. The Soviets' standard Indian Ocean squadron of around 20 to 22 ships included one cruiser, two destroyers, one or fewer cruise missile submarines, one attack submarine, two frigates, one minesweeper, two amphibious

7. Bruce W. Watson, *Red Navy at Sea: Soviet Naval Operations on the High Seas, 1956–1980* (Boulder, CO: Westview Press, 1982), 148.

8. Watson, *Red Navy at Sea*, 157.

9. Watson, *Red Navy at Sea*, 150.

ships, one or fewer intelligence collectors, 10 auxiliary ships, and one hydrographic research ship. Often, the Soviet fleet was even larger. In March 1978, for instance, the Soviet Indian Ocean Squadron consisted of 32 ships: two destroyers, two submarines, four frigates, four landing ships (tank), one minesweeper, and 19 auxiliaries (tenders, barracks ships, oilers, and so forth).¹⁰ The Soviet fleet generally lacked organic airpower, and the large number of auxiliary vessels indicates the logistical difficulties they faced. The high number of surface vessels and small number of submarines might also suggest the mission was largely a political rather than combat-oriented one.¹¹

Development of Soviet Airpower in the IOR

The Soviet air presence in the IOR developed in conjunction with the naval presence, with several years' lag. Operational access was also geographically constrained. The Soviet Union's lack of geographic contiguity with the Indian Ocean meant flight distances into the region were often long, and aircraft operating from Soviet territory had to overfly sovereign airspace to reach international airspace.

The refusal of US allies on the southern Asian littoral, such as Iran and Pakistan, to grant overflight rights and the difficulties Moscow faced in obtaining overflight rights from other countries constrained air access from Soviet territory. During the 1971 Indo-Pakistani War, the Soviet Air Forces were forced to stage their arms airlift to India via Egypt to avoid overflight of Pakistani or Chinese airspace.¹² Even Soviet strategic partners such as India were leery of granting overflight or staging rights to Soviet military aircraft, although the former granted such rights to the latter on occasion when doing so would benefit the former—for example, the Soviet airlift of military equipment to Vietnam during its 1979 war with China.

For many years—particularly, in the early years of the Cold War—the Soviets were denied overflight rights over much of Africa, severely constraining air access from the European theater. In the 1950s, Soviet aircraft could, in theory, only reach the Persian Gulf by flying from bases in Murmansk in the Arctic Circle over the Atlantic Ocean and then circumnavigating the entire African continent, which would have required a nonstop flight of some 13,000 nautical miles.¹³ Although these constraints were later loosened somewhat, in a Soviet airlift to Angola in 1975, aircraft were still forced to make lengthy diversions through western African airspace.¹⁴

As with the naval dimension, these constraints created a premium for access to local air bases for basing, staging, and logistical support. By the late 1970s, Moscow was able to breach the air containment ring in the IOR by gaining air bases and access to air facilities or staging rights in and around the Horn of Africa, including at Aden, South Yemen (beginning in 1974);

10. Michael McDevitt, *Great Power Competition in the Indian Ocean: The Past as Prologue?* (Arlington, VA: CNA, March 2018), 10.

11. Watson, *Red Navy at Sea*, 148.

12. Gillette and Frank, *Soviet Naval Conduct*, 252.

13. Commission on Integrated Long-Term Strategy, *Discriminate Deterrence* (Washington, DC: Government Publishing Office, 1988), 24.

14. Harkavy, *Bases Abroad*, 98.

Berbera, Somalia (1974–77); an Asmara, Ethiopia (now Eritrea) (1977–84); and access to secondary staging points in Mozambique (beginning in 1977).¹⁵

The composition of Soviet airpower in the IOR largely involved long-range transport and maritime surveillance and strike aircraft based in the Soviet Union, with shorter-range Ilyushin Il-38 maritime patrol aircraft based in or near the Horn of Africa. This composition allowed the Soviet reconnaissance aircraft to cover much of the northwestern Indian Ocean regularly, including to the Suez Canal and Strait of Hormuz. Tupolev Tu-95 “Bears” flying from the Soviet Union and staging throughout the Horn of Africa could have covered a much broader area as well. In the 1980s, long-distance maritime surveillance and strike aircraft were also based in Afghanistan.

One of the biggest Soviet air operations in the IOR was an emergency airlift of arms to Ethiopia in 1977–78 that involved 225 transport aircraft in a perceived demonstration of Soviet airlift capabilities. According to public reports, Soviet aircraft based in Ukraine and Hungary were forced to overfly several countries (Yugoslavia, Pakistan, Iran, Turkey, Greece, Israel, Egypt, Sudan, and Libya) without consent.¹⁶

Outside of the Horn of Africa, Soviet access to air bases or staging points elsewhere in the IOR was very limited. Attempts by Moscow to gain airfield access in Seychelles were not successful, nor were attempts to lease the old British air base at Gan in the Maldives.¹⁷ The Soviets were forced to rely largely on Cam Ranh Bay, Vietnam (starting in 1979) for access to Southeast Asia and the eastern Indian Ocean. Soviet attempts to use the Non-Aligned Movement in a counterstrategy to deny the United States access to air and other military bases in Egypt, Kenya, Oman, and Somalia were also unsuccessful.¹⁸

Soviet Land Power in the IOR

With one major exception, the Soviet ground forces generally played a less significant role in the region compared to Soviet naval and air forces. Because of the noncontiguity of Soviet territory with the Indian Ocean, the army also generally relied on air and naval forces for access to the region. The Soviet fleet in the Indian Ocean commonly included one (and up to four) amphibious vessels with embarked naval infantry, and the fleet principally pursued Soviet political objectives. For instance, for several years, a Soviet amphibious ship with 250 troops (reportedly dubbed the “baby-sitter”) was regularly anchored in Seychelles to discourage coups against the Soviet-friendly regime.¹⁹

15. CIA, *DDCI Briefing*, 14; and Louis Andolino and Louis Eltscher, *Soviet Naval Military and Air Power in the Third World*, Report no. N00124-83RC-02893 (Newport, RI: Center for Naval Warfare Studies, March 1984), 24.

16. John B. Hattendorf, ed., *Naval Policy and Strategy in the Mediterranean: Past, Present and Future* (London: Routledge, 2000); and Drew Middleton, “Airlift to Ethiopia Seen as Soviet Test,” *New York Times*, January 8, 1978.

17. Roy Allison, *The Soviet Union and the Strategy of Non-Alignment in the Third World* (Cambridge, UK: Cambridge University Press, 1988), 209; and Peter Gill, “Russia Fails in Bid for Ex-RAF Base,” *Daily Telegraph*, October 28, 1977.

18. Allison, *Strategy of Non-Alignment*, 210.

19. McDevitt, *Great Power Competition*, 16.

At different times throughout the 1970s and 80s, Soviet military advisers were deployed to IOR littoral states, such as Ethiopia, Mozambique, Somalia, and South Yemen, and nearby countries, such as Angola, Egypt, and Iraq. The largest Soviet ground forces deployment to an Indian Ocean littoral state occurred in 1977–78, when 1,500 Soviet advisers and 16,000 Cuban combat troops were deployed to Ethiopia through a major airlift and sealift to assist the country in its war with Somalia.

The largest Soviet ground forces deployment in the broader IOR was to Afghanistan, where 600,000 Soviet military personnel served between 1979 and 1989. (Afghanistan is generally understood to form part of the broader IOR, although Afghan territory lies at least 480 kilometers from the sea.) Afghanistan's contiguity with Soviet territory provided both the imperative for Soviet intervention and the means by which such a large military presence could be sustained.

Constraints on China's Access to the Indian Ocean and China's Future Military Presence

This section discusses the PLA's current and future operational access to the IOR, considering geographic constraints and China's strategic imperatives.

China's Strategic Imperatives and Its Future Military Presence

An overall evaluation of Chinese strategic thinking about the IOR is generally beyond the scope of this paper. But, notably, for more than a decade, the PLA Navy's (PLAN's) strategic plans have been evolving toward a two-ocean strategy that would include a permanent naval presence in the Indian and Pacific Oceans. Indeed, You Ji argues the Indian Ocean “will gradually become a linchpin for China's new global naval reach.”²⁰ More recently, the IOR has been a key focus of China's Belt and Road Initiative, including as the maritime space connecting China with its sources of energy in the Middle East and Africa and China's transport route to Europe and other important markets. The Belt and Road Initiative is now the principal driver behind China's growing economic and military presence in the region.²¹

Despite its growing importance, for China, the IOR is clearly a region of secondary importance compared with the western Pacific. Beijing nevertheless has considerable and growing strategic equities in the region that drive several strategic imperatives or missions, including:

- conducting noncombat activities that focus on protecting Chinese citizens and investments;
- gaining experience in expeditionary operations;

20. You Ji, “The Indian Ocean: A Grand Sino-Indian Game of ‘Go,’” in David Brewster, ed., *India and China at Sea: Competition for Naval Dominance in the Indian Ocean* (Oxford, UK: Oxford University Press, 2018), 90–110.

21. David Brewster, “The Red Flag Follows Trade: China's Future as an Indian Ocean Power,” in *Strategic Asia 2018–19: Mapping China's Expanding Strategic Ambitions* (Seattle: National Bureau of Asian Research, 2019), 175–210.

- bolstering China's soft-power influence, including its reputation as a responsible international actor;
- undertaking counterterrorism activities, unilaterally or with partners, against organizations that threaten China;
- collecting intelligence in support of operational requirements and against key adversaries;
- supporting efforts aimed at coercive diplomacy toward small countries in the region; and
- enabling effective operations in a conflict environment—namely, the ability to deter, mitigate, or terminate a state-sponsored interdiction of trade bound for China and to meaningfully hold at risk US or Indian assets in the event of a wider conflict.²²

Although the protection of sea lines of communication (SLOCs)—particularly, energy imports from the Persian Gulf and Africa—is a crucial imperative for China, in practice, other imperatives may become just as important in influencing the composition, size, and locations of China's regional military presence. The People's Liberation Army must be capable of responding to a range of contingencies in the region. But, although the size of its naval and military presence in the IOR has been growing, China has so far been relatively cautious and incremental in its approach.

As part of its calculations, China must consider a complicated strategic environment in the IOR that involves a three-way competition among China, the United States, and India (although competition between the latter two is muted). Sino-American competition in the IOR is derivative of global competition between these countries. In contrast, the Sino-Indian relationship involves a quite different and sometimes more intense strategic dynamic. Indeed, the Indian Ocean has an important role in the overall relationship between India and China. In almost every dimension (economic power and the nuclear and conventional balance in the Himalayas), India is at a strategic disadvantage with China. Only in the Indian Ocean does India have the upper hand, meaning Delhi might, for example, be tempted to escalate a conflict in the Himalayas to the Indian Ocean.²³ Rivalry with India therefore substantially complicates China's calculations in the IOR, increasing the capabilities the country would need to deal with a wide range of contingencies. Overall, compared with the Soviet Union, China probably faces a significantly more complex strategic environment in the IOR.

As noted, the geographic constraints faced by China in the IOR are similar to those previously faced by the Soviet Union. As will be discussed later, China is seeking to mitigate these constraints through:

22. Joshua White, "China's Indian Ocean Ambitions: Investment, Influence and Military Advantage," Brookings Institution (website), June 2020, https://www.brookings.edu/wp-content/uploads/2020/06/FP_20200615_chinas_indian_ocean_ambitions_white-1.pdf; and Brewster, "Red Flag."

23. David Brewster, "India-China Conflict: A Move from the Himalayas to the High Seas?," *Interpreter* (blog), July 10, 2020, <https://www.lowyinstitute.org/the-interpreter/india-china-conflict-move-himalayas-high-seas>.

- developing new land routes through Pakistan and Myanmar to facilitate land-based access to the Indian Ocean, including through oil and gas pipelines;
- developing maritime logistical infrastructure to support an extended naval presence;
- developing air access points; and
- opportunistically building political partnerships with Indian Ocean states, including through the development of economic dependencies.

China's Future Naval Presence in the IOR

The PLA Navy currently has a leading role in China's military presence in the IOR, reflecting China's key strategic imperative of SLOC protection and other interests in the maritime domain and, perhaps, the political advantages of a small and relatively transient naval footprint. The PLA Navy is now pursuing a two-ocean strategy that has involved revising PLAN doctrine and developing new capabilities, facilities, and arrangements with host countries. Importantly, the PLA Navy's deployment in the Gulf of Aden since 2008 has also given it a decade's head start in developing its expeditionary capabilities in the region compared to the PLA Ground Force and PLA Air Force (PLAAF).

Command arrangements for the region are likely to evolve in conjunction with its naval presence. Despite unconfirmed reports the PLA Navy intended to establish a fourth fleet with responsibility for the Indian Ocean, to date, PLAN operations in the Indian Ocean have been conducted by multiple fleets.²⁴ These operations are generally overseen by PLAN headquarters in Beijing because the region is not yet clearly assigned to a specific theater command.²⁵

The size and composition of PLAN deployments to the Indian Ocean have evolved since 2008. Deployments now include an anti-piracy task force of around three ships (which typically include two surface combatants and a support vessel) and four to five hydrographic and intelligence collection vessels and other auxiliaries, plus submarines. In 2017, the Indian Navy estimated an average of eight PLAN vessels were deployed in the Indian Ocean, although numbers spike during an exercise in the region or when task groups cross over in transit.²⁶ Since 2010, the PLA Navy's presence has included regular deployments of the hospital ship 和平方舟 (*Peace Ark*), which has provided medical services to tens of thousands of local people in Bangladesh, Djibouti, Kenya, Maldives, Seychelles, Tanzania, and other countries.

The future shape and composition of the PLA Navy's presence in the IOR is uncertain, and its future presence may grow to resemble that of the US Navy, particularly if Beijing seeks to have

24. David McDonough, "Hainan Island and China's South Sea Fleet," *Strategist* (blog), March 19, 2015, <https://www.aspistrategist.org.au/hainan-island-and-chinas-south-sea-fleet/>.

25. Randall G. Shriver et al., "China's Influence on Conflict Dynamics in South Asia," United States Institute of Peace (website), December 2020, <https://www.usip.org/publications/2020/12/chinas-influence-conflict-dynamics-south-asia>.

26. Press Trust of India, "India Begins Project to Build Six Nuclear-Powered Submarines," NDTV (website), December 1, 2017, <https://www.ndtv.com/india-news/india-begins-project-to-build-6-nuclear-powered-submarines-1782555>; and *Sentinel* Digital Desk, "China Navy's Forays Spike amid COVID-19 Pandemic," *Sentinel* (website), May 31, 2020, <https://www.sentinelassam.com/national-news/chinese-navys-forays-spike-amid-covid-19-pandemic-479947>.

the ability to protect its Indian Ocean SLOCs. This capability would be a major undertaking, requiring the sustained deployment of large numbers of ships, including aircraft carriers and submarines, and land-based aircraft, including long-range maritime surveillance and strike aircraft. The capability would require several naval and air bases in the region and the development of local military partnerships. Such a strategy may focus on the Persian Gulf and northwestern Indian Ocean, but the strategy would also require operational access in the southwestern, central, and eastern parts of the Indian Ocean, including the Southeast Asian maritime choke points. Unlike the United States, which can access the Persian Gulf by either the westabout route or the eastabout route, in practice, China can only access the Persian Gulf by transiting the Southeast Asian choke points.

Beijing may judge protecting the entirety of China's Indian Ocean SLOCs against threats from the United States and India is impractical. Rather than dispersing naval resources to distant waters in a theater that is essentially secondary, the People's Liberation Army may choose to focus principally on threats in the Pacific while pursuing more limited strategic objectives in the IOR, such as military operations other than war (MOOTW) or a limited contingency or sea-denial strategy.

The PLA Navy's presence in the Indian Ocean over the last decade has focused overwhelmingly on MOOTW, including anti-piracy operations, noncombatant evacuation operations (NEOs), and naval diplomacy. These operations will likely continue to be a major focus of China's regional concerns, and the operations might increasingly evolve to include limited, coercive gunboat diplomacy (for instance, in disputes over access to fishing or other marine resources), as has been the case elsewhere. This evolution might require additional Chinese naval resources, which would potentially be supplemented by vessels from the Chinese coast guard or other maritime agencies for the protection of Chinese fishing vessels and other assets.²⁷ The Chinese coast guard fleet currently includes 130 vessels weighing more than 1,000 tons.

China may develop additional capabilities over time sufficient to provide limited or asymmetrical options for responding to some contingencies. With these capabilities, China could create local superiority, respond to a limited distant blockade, provide naval support for local interventions, or undertake limited sea-denial operations. All of these missions would be broadly analogous to the Soviet Union's Indian Ocean strategy from the mid-1970s. This expanded capability could provide China with options for responding to certain contingencies at a fraction of the cost of a full sea-control strategy.

An enhanced submarine presence or land-based systems could provide valuable sea-denial capabilities in the Indian Ocean. China has increased both conventional and nuclear submarine deployments to the Indian Ocean. But lack of access to submarine support facilities would mean, in a contingency, the PLA Navy would be forced to surge submarines into the Indian Ocean through the narrow Southeast Asian choke points, where they could

27. David Brewster, "Chinese Fishing Fleet a Security Issue for Australia," *Interpreter* (blog), November 7, 2018, <https://www.lowyinstitute.org/the-interpreter/chinese-fishing-fleet-security-issue-australia>; and Dzirhan Mahadzir, "Chinese Navy Piracy Patrol Shepherds Fishing Fleet through Gulf of Aden," USNI News (website), January 6, 2022, <https://news.usni.org/2022/01/06/chinese-navy-piracy-patrol-shepherds-fishing-fleet-through-gulf-of-aden>.

be tracked and interdicted relatively easily. The development of Chinese-controlled submarine support facilities would therefore be an important indicator of Beijing's strategy. A sea-denial strategy might also involve some land-based capabilities. Missiles based on Chinese territory would in theory cover parts of the Arabian Sea and the Bay of Bengal, but the distances involved would limit their effectiveness. China would therefore need to deploy such systems locally.²⁸

Overcoming Constraints on Naval Access

As with the Soviet Navy, the PLA Navy is subject to significant constraints on operational access to the IOR, including:

- extreme distances from home ports in the western Pacific;
- access to the region through narrow choke points in the Indonesian Archipelago; and
- imperatives to acquire or develop local support facilities.

These factors mean access to naval support facilities would be a key factor in any sustained Chinese naval presence in the Indian Ocean. But the nature and extent of China's basing requirements would also depend on its overall strategy. A strategy focused on MOOTW could be satisfied through relying as much as possible on a "places not bases" approach of negotiating assured access rights to commercial facilities while minimizing the need for bases.

Driven by needs such as support for China's anti-piracy task force; China's UN peacekeeping presence in Africa; and likely future NEOs in Africa, the Middle East, and the Mediterranean, China opened its first overseas military base in Djibouti in 2017. The People's Liberation Army could also use the base as a hub for supporting counterterrorism operations and training for forward-deployed forces. Currently, around 2,000 army, navy, and special forces personnel are deployed to the base. The port facilities, which are currently undergoing expansion, will allow for the docking of up to four vessels, including replenishment and amphibious vessels.²⁹ Several factors, however, limit the base's utility for operations beyond MOOTW. The base's short (400-meter) airfield means, for manned, fixed-wing aircraft, China must share Djibouti's international airport with the United States and others. The Chinese base's proximity to US and French facilities would also make the base of questionable value in a major conflict.

Therefore, China's base in Djibouti will not necessarily be a model for other naval support facilities in the region. Any significant and sustained Chinese naval presence in the Indian Ocean with missions beyond MOOTW would likely require support facilities comparable to traditional bases, along with associated airfields under Chinese operational control.³⁰

China's approach to securing local facilities of this nature appears to be quite different and much more deliberate and comprehensive compared with the Soviet approach in the 1970s and 1980s.

28. Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2018* (Washington, DC: Office of the Secretary of Defense), 371.

29. Jean-Pierre Cabestan, "China's Military Base in Djibouti: A Microcosm of China's Growing Competition with the United States and New Bipolarity," *Journal of Contemporary China* 29, no. 125 (2020): 731–47.

30. McDevitt, *Great Power Competition*, 2.

China may be seeking to build “strategic strong points,” as they are sometimes called, as part of a network of supply, logistics, and intelligence hubs across the IOR. The characteristics of these strong points would include:

- strategic location, positioned astride major SLOCs or near vital maritime choke points;
- high-level coordination among Chinese party-state officials, state-owned enterprises, and private firms;
- comprehensive commercial scope, including Chinese-led development of associated rail, road, and pipeline infrastructure and efforts to promote trade, financing, industry, resource extraction, and inland markets; and
- potential or actual military use, with dual-use functions that can enable both economic and military activities.³¹

Whether such a strategy would be successful in yielding assured access to naval support facilities, including under wartime conditions, is unclear. The Department of Defense recently noted Beijing has considered or inquired about basing or logistics facilities in numerous countries in the IOR, including Angola, Indonesia, Kenya, Myanmar, Pakistan, Seychelles, Singapore, Sri Lanka, Thailand, and the United Arab Emirates.³² With the exception of Djibouti, no potential host country has offered bases or facilities to the PLA Navy. Indeed, in recent years, several potential host countries have pushed back about the terms of potential port developments (for example, Myanmar and Tanzania) as well as popular concerns about allegations of associated corruption (Maldives).³³ Even when host countries have pushed back against China’s plans, projects have sometimes been given the go-ahead on new terms.³⁴

The new port at Gwadar, Pakistan, located around 400 kilometers east of the Strait of Hormuz, is often identified as the most likely location of another Chinese naval base in the northwestern Indian Ocean. Chinese analysts reportedly view Gwadar as a top choice for establishing a new, overseas strategic strongpoint because of its prime geographic location and strong Sino-Pakistani ties. Importantly, Gwadar also represents a potential exit to the ocean, which would for the first time involve the creation of an overland link between Chinese territory and the Indian Ocean via a corridor through Pakistan. The port has been under Chinese management since 2013 and now includes extensive port infrastructure, a new airfield with a 3,600-meter runway,

31. Conor Kennedy, “Strategic Strong Points and Chinese Naval Strategy,” *China Brief* 19, no. 6 (March 22, 2019): 19–26.

32. Office of the Secretary of Defense, *Military and Security Developments*.

33. Eric Olander, “Tanzania: Why Bagamoyo Port Deal with China Is an Uphill Battle,” Africa Report (website), July 1, 2021, <https://www.theafricareport.com/104597/tanzania-why-bagamoyo-port-deal-with-china-is-an-uphill-battle/>; Kanupriya Kapoor and Aye Min Thant, “Exclusive: Myanmar Scales Back Chinese-Backed Port Project Due to Debt Fears – Official,” Reuters (website), August 2, 2018, <https://www.reuters.com/article/us-myanmar-china-port-exclusive-idUSKBN1KN106>; and Editors, “Maldives Voters Sweep Away the Remnants of a Corrupt, China-Backed Regime,” World Politics Review (website), April 23, 2019, <https://www.worldpoliticsreview.com/trend-lines/27783/maldives-voters-sweep-away-the-remnants-of-a-corrupt-china-backed-regime>.

34. Dipanjan Roy Chaudhury, “Myanmar Junta Expedites Work on China Funded Kyaukphyu Port,” *Economic Times* (website), August 9, 2021, <https://economictimes.indiatimes.com/news/international/world-news/myanmar-junta-expedites-work-on-china-funded-kyaukphyu-port/articleshow/85167272.cms?from=mdr>.

and a 600-meter deepwater quay that can accommodate up to three 50,000-ton ships. Though uncertainty about Pakistan's political commitments might reduce Gwadar's utility as a wartime base, the port could become a key peacetime replenishment or transfer point for PLA equipment and personnel. Replenishment could even be undertaken by commercial vessels operating out of Gwadar, which would reduce international criticism.³⁵ Despite claims by many analysts, however, the People's Liberation Army has not used Gwadar, though one PLA officer was reported as having commented, "The food is already on the plate; we'll eat it whenever we want to."³⁶

Any comprehensive Chinese naval presence in the IOR likely would also require assured access to facilities in the southwestern Indian Ocean, though local states have so far been reluctant hosts. Some have speculated China has sought naval access arrangements in the Seychelles and at Walvis Bay in Namibia, neither of which have eventuated.³⁷ Bagamoyo in Tanzania, where China was planning to invest some \$10 billion in a new deepwater port with a 99-year lease, has been suggested as another possible location for Chinese-controlled facilities. In April 2020, the Tanzanian president reportedly canceled the deal after China refused to renegotiate its terms, but the deal may now have been revived.³⁸ Several other economically and politically weak states in and around the southwestern Indian Ocean may be susceptible to offers of Chinese assistance, including Comoros, Madagascar, and Mozambique. The incipient insurgency Mozambique is now experiencing in its northern province could also lead to political fragility and the need for security assistance.

Any strategy involving the protection of Chinese SLOCs from major competitors would also require naval facilities in the central and eastern Indian Ocean to secure the SLOCs that pass through Southeast Asia and across the northern Indian Ocean. Though Beijing has several potential locations from which to choose, its progress in establishing a foreign port has been limited. Hambantota in southern Sri Lanka is frequently cited as a likely candidate, especially after China gained effective control of the port in 2017. In December of that year, a Chinese state-owned company gained an effective 70 percent equity interest in a 99-year lease for the port. Although the Sri Lankan government has created a separate management company, the details of ownership and control remain murky. The PLA Navy doubtless intends to use the port for logistical support.³⁹ The nearby airport with a 3,500-meter runway would also be of significant value, but the extent to which the Sri Lankan government would allow China to control port facilities is unclear. Further, although it is close to major sea lanes, the port's proximity to Indian air bases makes it vulnerable.⁴⁰

35. Isaac B. Kardon, Connor M. Kennedy, and Peter A. Dutton, *Gwadar: China's Potential Strategic Strongpoint in Pakistan*, China Maritime Report no. 7 (Newport, RI: China Maritime Studies Institute, 2020), 50.

36. Kardon, Kennedy, and Dutton, *Gwadar*, 51.

37. Adam Hartman, "Chinese Naval Base for Walvis Bay," *Namibian*, November 19, 2017.

38. Prachi Mittal, "Falling Apart—A Story of the Tanzanian Bagamoyo Port Project," Observer Research Foundation (website), September 15, 2020, <https://www.orfonline.org/expert-speak/falling-apart-a-story-of-the-tanzanian-bagamoyo-port-project/>; and Olander, "Tanzania."

39. Rear Admiral Hu Zhongming (deputy chief of staff, People's Liberation Army Navy), interview by the author, October 21, 2019.

40. Daniel J. Kostecka, "Places and Bases: The Chinese Navy's Emerging Support Network in the Indian Ocean," *Naval War College Review* 64, no. 1 (2011).

China is also building a new deepwater port at Kyaukpyu in Myanmar, including proposed features that suggest future military use. For instance, China reportedly sought to dredge the Kyaukpyu port much more deeply than would be required for commercial vessels.⁴¹ This port is also the terminus of a new overland pathway being constructed from southern China through Myanmar. The government of Myanmar significantly scaled back development plans due to its fear of losing control of the port if the government were unable to repay its debts.⁴² Before construction on this port began, Myanmar's leaders, famously protective of the nation's sovereignty, had always refused China permission to undertake military activities from Myanmar territory.⁴³

In previous years, the Maldives, located in the central Indian Ocean, also became the object of strategic competition between China and India.⁴⁴ A worst-case scenario would involve the Maldives granting the PLA Navy or the PLA Air Force access to the former British port and air base on the island of Gan, located only 740 kilometers north of Diego Garcia. But the country has tilted away from Beijing (for the time being) due to the 2018 election of a new administration that is keen to develop security links with India and the United States.⁴⁵

China's Future Airpower Presence in the IOR

China should also be expected to develop its regional airpower capabilities through the PLA Air Force or PLA Naval Air Force. China requires airpower capabilities in support of various MOOTW, including support for NEOs, UN peacekeeping missions, humanitarian assistance and disaster relief missions, and limited military tasks. The Chinese government has conducted several NEOs in (or staged through) the IOR and nearby areas, including in Timor-Leste (2006), Thailand (2008), Egypt (2011), Libya (2011), Iraq (2014), and Yemen (2015). The 2011 evacuation of 35,000 Chinese citizens from Libya was the largest and most complex operation to date. The operation included the evacuation of around 2,000 people on PLAAF aircraft staging through Khartoum, Sudan. Difficulties faced in the evacuation may have caused Beijing to reconsider its need for foreign military bases.⁴⁶ Further, large NEOs should be expected in the future as the number of Chinese nationals grows in Africa and West Asia. The People's Liberation Army may also play a growing role in NEOs as it gains experience in expeditionary operations in difficult environments.

41. David Brewster, "China's Play for Military Bases in the Eastern Indian Ocean," *Interpreter* (blog), May 15, 2018, <https://www.lowyinstitute.org/the-interpreter/china-s-play-military-bases-eastern-indian-ocean>.

42. Jason Koutsoukis, "The Fishing Port That May Become a \$10 Billion Chinese Debt Bomb," Bloomberg (website), May 10, 2018, <https://www.bloomberg.com/news/articles/2018-05-10/the-fishing-port-that-may-become-a-10-billion-chinese-debt-bomb>; and Nan Lwin, "Construction on China's BRI Deep Sea Port to Start Soon in Myanmar's Rakhine State: Govt," *Irrawaddy* (website), June 24, 2020, <https://www.irrawaddy.com/news/burma/construction-chinas-bri-deep-sea-port-start-soon-myanmars-rakhine-state-govt.html>.

43. Andrew Selth, "Burma's Mythical Isles," *Australian Quarterly* 80, no. 6 (2008): 24–28.

44. David Brewster, *Between Giants: The Sino-Indian Cold War in the Indian Ocean*, *Asie.Visions* 103 (Paris: Institut Français des Relations Internationales, 2018).

45. Abhijnan Rej, "India Welcomes US-Maldives Defense Cooperation Agreement in a Sign of Times," *Diplomat* (website), September 15, 2020, <https://thediplomat.com/2020/09/india-welcomes-us-maldives-defense-cooperation-agreement-in-a-sign-of-times/>.

46. Cabestan, "China's Military Base."

An enhanced naval presence beyond MOOTW would require substantial airpower support, including from maritime surveillance and strike aircraft. China's lack of maritime domain awareness in the Indian Ocean places the country at a major tactical disadvantage with potential adversaries. This deficiency would be difficult to mitigate with satellites, ship-based aircraft, or land-based aircraft operating from Chinese territory.⁴⁷ China would thus require capabilities for land-based maritime air surveillance to cover at least three quadrants of the IOR—the southwest, northwest, and northeast. At present, the maritime surveillance capabilities of the PLA Air Force and PLA Naval Air Force are rudimentary, and they have only “nascent” experience with expeditionary operations beyond Chinese territory.⁴⁸ Accordingly, China's lack of long-range maritime surveillance capabilities and local airbasing would be a major constraint on its ability to pursue an expansive naval strategy.

China does not yet have facilities in the IOR suitable for manned fixed-wing aircraft. As noted, the Chinese base in Djibouti does not include long runways under Chinese control. The newly built airfield at Gwadar in Pakistan, which includes secure housing and medical facilities, may be a better location for local basing or the staging of aircraft based in western China, potentially providing coverage for much of the northwestern Indian Ocean and Persian Gulf.⁴⁹ As yet, few credible public reports suggest the People's Liberation Army has used this facility substantially. Nor does the PLA Air Force have assured airfield access in the eastern, central, or southwestern Indian Ocean. This lack of access could significantly constrain any enhanced pan-Indian Ocean military strategy. Several states in the southwestern Indian Ocean could be candidates for PLAAF facilities; indeed, over the last several years, the Russian Air Force has negotiated formal airspace access arrangements with several countries, such as Egypt, Sudan, Madagascar, and Mozambique. One potential location for PLAAF access in the central and eastern Indian Ocean is Hambantota in Sri Lanka. The PLA Air Force could also use the newly Chinese-built 3,400-meter airfield at Dara Sakor, Cambodia, as an access point into the eastern Indian Ocean; doing so would echo the Soviet use of the nearby airfield at Cam Ranh Bay, Vietnam, during the Cold War.⁵⁰

Nathan Beauchamp-Mustafaga argues the relative lack of focus on airpower may reflect the leading role the PLA Navy has taken in the IOR. For example, one PLAAF researcher asserted, “[T]he People's Liberation Army has not yet established any overseas air transportation support bases due to geopolitical sensitivities and a lack of demand for projection,”

47. Raja Menon, “Scenarios for China's Naval Deployment in the Indian Ocean and India's Naval Response,” in Brewster, *India and China at Sea*, 125–36.

48. Mark R. Cozad and Nathan Beauchamp-Mustafaga, *People's Liberation Army Air Force Operations over Water: Maintaining Relevance in China's Changing Security Environment* (Santa Monica, CA: RAND Corporation, 2017); and Cristina Garafola and Timothy Heath, *The Chinese Air Force's First Steps toward Becoming an Expeditionary Air Force* (Santa Monica, CA: RAND Corporation, 2017), 1.

49. Kardon, Kennedy, and Dutton, *Gwadar*, 50.

50. John Foulkes and Howard Wang, “China's Future Naval Base in Cambodia and the Implications for India,” *China Brief* 19, no. 15 (2019): 12–17.

and this gap is becoming a “bottleneck problem” limiting the People’s Liberation Army’s strategic power projection overseas.⁵¹

China’s Future Land-Power Presence in the IOR

In the short to medium term, Chinese land forces may play a less prominent role in much of the IOR for political and geographic reasons. Beijing’s political preference will likely be to minimize China’s security footprint by relying as much as possible on local security forces (such as Pakistan’s special security detachment of more than 15,000 military personnel committed to the protection of Chinese nationals and assets). China would supplement this reliance on local forces with private-security contractors, both local and China-based.⁵²

The Chinese land forces that are currently deployed within the broader IOR include more than 2,000 troops and police participating in UN peacekeeping operations in Africa and around 1,000 ground troops stationed in Djibouti.⁵³ Given the Djibouti base reportedly has accommodations for up to 10,000 personnel, these forces will likely grow in response to future contingencies, potentially including political interventions.⁵⁴

The respective future roles and contributions to China’s future land forces in the IOR of the PLA Ground Force, PLAN marines, and paramilitary organizations like the Chinese People’s Armed Police Force are not yet clear. The PLA Ground Force might play a more important role in South Asian states that are geographically contiguous with Chinese territory, such as India, Myanmar, and Pakistan. Elsewhere in the region, where China relies on naval and air forces for operational access, PLAN marines may play a greater or a leading role. On several occasions (including in 2010, 2014, 2018, and 2019), amphibious vessels with or without embarked marines have been deployed to the eastern and northwestern Indian Ocean for exercises or as part of the PLA Navy’s anti-piracy task groups.⁵⁵ Marines of the PLA Navy have also deployed to the base at Djibouti.⁵⁶

51. Nathan Beauchamp-Mustafaga, “Where to Next?: PLA Considerations for Overseas Base Site Selection,” *China Brief* 20, no. 18 (2020): 27–35.

52. Brewster, “Red Flag.”

53. Cabestan, “China’s Military Base.”

54. Cabestan, “China’s Military Base.”

55. Andrew Erickson and Austin Strange, *Six Years at Sea . . . and Counting: Gulf of Aden Anti-Piracy and China’s Maritime Commons Presence* (Washington, DC: The Jamestown Foundation, 2015); Ananth Krishnan, “New Indian Ocean Exercise Shows Reach of China’s Navy,” *Hindu* (website), February 5, 2014, <https://www.thehindu.com/news/international/world/New-Indian-Ocean-exercise-shows-reach-of-Chinas-Navy/article11530612.ece>; Atul Aneja, “China Deploys Warships in Indian Ocean,” *Hindu* (website), updated February 21, 2018, <https://www.thehindu.com/news/international/china-deploys-warships-in-indian-ocean/article22808463.ece>; and IANS, “Chinese Amphibious Warship Sighted in Indian Ocean,” *India TV News* (website), September 16, 2019, <https://www.indiatvnews.com/news/india/chinese-amphibious-warship-sighted-in-indian-ocean-549925>.

56. Minnie Chan, “As Overseas Ambitions Expand, China Plans 400 per Cent Increase to Marine Corps Numbers, Sources Say,” *South China Morning Post* (website), March 13, 2017, <https://www.scmp.com/news/china/diplomacy-defence/article/2078245/overseas-ambitions-expand-china-plans-400pc-increase>; and H. I. Sutton, “The Chinese Navy’s Unusually Heavily Defended Fortress near the Indian Ocean,” *Forbes* (website), May 15, 2020, <https://www.forbes.com/sites/hisutton/2020/05/15/chinas-new-fortress-near-the-middle-east-and-indian-ocean/?sh=4a950e8c4066>.

Conclusion

This chapter has examined the PLA's future operational access to the IOR, with particular emphasis on geographical challenges and China's strategic imperatives. The chapter included a case study on the Soviet Union's experience during the Cold War as a way of examining the impact of these imperatives and challenges. Although the IOR may now be of greater strategic importance to China than it was to the Soviet Union during the Cold War, geographic constraints will nevertheless mold China's future military presence.

One clear lesson from the Cold War is that geographic constraints on access to the IOR create a strong imperative to secure local bases or assured access rights with local partners, although doing so may be costly. China's relationships with Pakistan (which, among other things, can provide direct land access between Chinese territory and the Indian Ocean), Djibouti (a maritime and air hub for the northwestern Indian Ocean), and Sri Lanka (potentially a key maritime and air hub in the central and eastern Indian Ocean) demonstrate the importance of the imperative to secure access as a driver of China's political, economic, and security relationships in the region. In this respect, China can be expected to exploit regional rivalries and threat perceptions (for instance, between India and some of its South Asian neighbors), to its advantage. But, like the Soviet Union, China may find relationships with some countries—particularly, corrupt and autocratic regimes—are less reliable than it might have hoped.⁵⁷ China could also seek to mitigate these difficulties through partnering with Russia, including the use of Russia-controlled facilities, particularly in Africa.⁵⁸

The experience of the Soviet Union also provides the following useful tactical lessons.

1. When onshore naval support is unavailable, potential mitigation strategies include the use of portable equipment, such as floating piers (which naval forces can move if a host revokes onshore access rights) and floating bases (to provide logistical support).
2. Amphibious and noncombatant vessels (such as hospital and hydrographic ships) are valuable for extending regional influence.
3. Deploying large numbers of vessels in the Indian Ocean during normal times may not create lasting superiority in the theater because the United States can swing naval resources between different theaters in response to contingencies.
4. Geography imposes important constraints on airpower access. For example, overflight restrictions can prevent access to local airfields needed to support long-distance transport and surveillance aircraft.

57. Brewster, *Between Giants*.

58. Oriana Skylar Mastro, "Russia and China Team Up on the Indian Ocean," *Interpreter* (blog), December 16, 2020, <https://www.lowyinstitute.org/the-interpreter/russia-and-china-team-indian-ocean>.

Finally, the Soviet experience during the Cold War suggests the size and composition of the People's Liberation Army in the IOR will principally be a function of China's interests in the region. China's interests often differ from those of the United States. One cannot assume China's future military presence and regional security relationships will necessarily resemble those of the United States closely.

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Laying the Groundwork for PLA Operations in the Polar Regions

Rebecca Pincus

Introduction

The polar regions—the Arctic Ocean and the Antarctic continent—may seem an odd choice to include in an exploration of Chinese military operations. To date, the People’s Liberation Army (PLA) does not maintain a permanent military presence in either polar region, and any PLA presence has been sporadic, limited, and generally in a supporting capacity. Under the terms of the Antarctic Treaty System, no country is permitted to maintain a military presence in Antarctica.¹ In the Arctic, seven of the eight Arctic states maintain military bases on or above the Arctic Circle; Iceland is the exception. The People’s Liberation Army does not yet have a significant operational presence in the polar regions, but the organization has a large and growing scientific research presence in both the Arctic and Antarctic. These polar research programs are a clear indication of the People’s Republic of China’s (PRC’s) interest, and they serve multiple ends across the spectrum of diplomacy, information and science, military, and economics.

The sparseness of PLA presence is unsurprising: The People’s Republic of China has a long list of more urgent priorities—particularly, in the near seas and the Indo-Pacific region. But the polar regions are strategic geographies, and China taking an interest in these regions as it becomes a global power is inevitable. Limited interests still require enumeration and consideration. Understanding how PRC interests in the polar regions may grow is important for preparing for a wide range of possible scenarios and contingencies. In addition, studying the development of China’s polar interests may illuminate their likely future course.

The familiar diplomacy, information and science, military, and economics framework provides a simple way to organize and assess Chinese interests in the polar regions. From a diplomatic perspective, engagement in the polar regions offers the People’s Republic of China an opportunity to gain influence in regions the country’s leadership considers strategic. As leading China watcher Anne-Marie Brady notes, China’s activities in the polar regions are partly symbolic: “If China succeeds in its goals in the polar regions, the high seas, outer space, and cyberspace, then its

1. “The Antarctic Treaty,” Secretariat of the Antarctic Treaty (website), n.d., <https://www.ats.aq/e/antarctic treaty.html>.

quest for international status and power will be assured.”² Similarly, polar science provides the information to support strategy, policy, and operations in these distant, unique areas. Although PLA military activity is nascent, placing the polar regions in the context of Beijing’s drive to develop a global military is possible. Finally, most scholars consider the primary PRC interest in the polar regions to be economic.³

In the context of global, great-power competition, the polar regions are key enablers that are strategically important, even without PLA presence. The ongoing program of scientific research in both polar regions demonstrates the People’s Republic of China is keen to learn more about these important regions and is seeking its own information. The growth and scope of Chinese polar research suggests Beijing desires a full information set to support decision making, and this desire may be an indication of intent for future PLA operations.

China has a strong and growing scientific research program in both polar regions.⁴ Military capabilities are involved in supporting scientific research, and the findings produced by this program of research will serve to advance PLA operational interests in years to come given the operational challenges inherent in polar regions. These challenges include the lack of modern hydrological charting in the Arctic and the unique weather conditions.⁵ The PLA’s operational access to the polar regions is growing and is practically being enabled by scientific research. Polar science thus serves as a gateway to the Arctic and Antarctica for China’s regional interests.

This chapter first enumerates China’s interests in the Arctic and the Antarctic. The Arctic region contains valuable resources and serves as a connector or transit zone between the north Pacific Ocean and the north Atlantic Ocean. Antarctica also remains a protected continent, despite being rich in resources. Polar presence carries a certain prestige, and polar science provides valuable insights into the future of climate change. The polar regions clearly interest Beijing. In 2018, the government released a white paper on China’s Arctic policy, making this interest clear.⁶ Understanding these interests lays the groundwork for assessing PLA operations now and in the future. Second, this chapter assesses the current extent and characteristics of PLA operations and capabilities in the polar regions. The chapter also sketches future capabilities still in development, such as China’s nuclear-powered icebreaker. A concluding section argues for a measured assessment of China’s interests and likely future presence in the polar regions and provides guideposts for future assessments.

2. Anne-Marie Brady, *China as a Polar Great Power* (Cambridge, UK: Cambridge University Press, 2017), 4.

3. Brady, *Polar Great Power*, 265.

4. “China and Antarctica,” Wilson Center (website), n.d., <https://www.wilsoncenter.org/event/china-and-antarctica>.

5. “Arctic Charting: Mapping a New Frontier,” National Oceanic and Atmospheric Administration (website), updated June 21, 2016, <https://www.noaa.gov/explainers/arctic-charting-mapping-new-frontier>.

6. State Council Information Office of the People’s Republic of China (PRC), “China’s Arctic Policy” (white paper, State Council Information Office of the PRC, January 26, 2018).

Why Is China—Particularly, the People’s Liberation Army—Interested in Polar Regions?

The first part of this chapter addresses the range of interests China maintains in the polar regions. China has no sovereign territory in the polar regions; as such, PRC national interests are limited. According to John Mearsheimer, among many other scholars, survival is the primary goal of states.⁷ Because China has no sovereign territory in either polar region, the nation has no survival interests there. A concentration of strategic weapons in the Arctic territory of an enemy could pose a survival threat, but the weapons would be the focus of interest, not the region itself.

Without sovereign territory, then, polar interests are secondary to China’s primary interest in its home region. Furthermore, Beijing’s scope of action is necessarily limited without sovereignty, which provides the basis for interests and action. As Yun Sun has pointed out, without sovereign territory in the polar regions, “many of China’s interests must be pursued indirectly and cautiously.”⁸

Broad National Interests

All four domains represented by the diplomacy, information and science, military, and economics framework give important perspectives on Beijing’s interests in the polar regions. Because China does not have sovereign territory to defend in the polar regions, its primary interest remains economic. China’s largest field of activity is science, and the country’s military interests are nascent. Diplomacy serves as a gateway to a region where Beijing only has limited scope of action.

According to the 2020 Department of Defense report on Chinese military power, “The CCP prioritizes economic development as the ‘central task’ and the force that drives China’s modernization across all areas, including its armed forces.”⁹ As the report observes, the People’s Republic of China integrates its economic and security strategies to pursue a fully fused objective of national “rejuvenation.” The authors of the report remark, “China’s economic, political, social, and security development efforts are mutually reinforcing and support China’s strategy of national rejuvenation.”¹⁰ This prioritization of economic development holds true in the Arctic as well.

China is the world’s largest exporter and second-largest importer.¹¹ The nation’s economy is based on importing raw materials and resources (including energy and food) and exporting manufactured goods to overseas markets.¹² The resources located in the Arctic region and the possible shipping routes across the Arctic Ocean are thus of interest. Antarctica also contains resources, though international law currently prohibits resource exploitation on the continent. Polar resources include all types of hydrocarbons (including petroleum, natural gas, and coal) and minerals and

7. John Mearsheimer, *The Tragedy of Great Power Politics* (New York: W. W. Norton, 2001).

8. Yun, Sun, *The Intricacy of China’s Arctic Policy* (Washington, DC: Stimson Center, August 27, 2018), 3.

9. Office of the Secretary of Defense (OSD), *Military and Security Developments Involving the People’s Republic of China 2020* (Washington, DC: OSD, 2020), v.

10. OSD, *Military and Security Developments 2020*, 11, 18.

11. *The World Factbook*, s.v. “China,” updated April 6, 2022, <https://www.cia.gov/the-world-factbook/countries/china/>.

12. Evie Fordham, “What Are China’s Major Imports and Exports?,” Fox Business (website), February 17, 2020, <https://www.foxbusiness.com/money/china-trade-exports-to-us-imports>.

metal ores, including strategic rare-earth elements and uranium.¹³ In addition, living marine resources in both the Arctic and Antarctica include potentially rich fish stocks. Thus, Beijing seeking access to these relatively undeveloped regions is not surprising.

A second important, high-level objective relates to strategic interests: China is pursuing a full-fledged nuclear triad, including the expansion and strengthening of the capabilities of the country's ballistic submarine fleet.¹⁴ Developing polar-capable, nuclear-armed submarines would constitute a major step toward this objective. In 2020, the annual Department of Defense report on Chinese military power noted, "Modernizing the PLAN's submarine force remains a high priority for the PRC."¹⁵ The 2019 edition of the report even warned of Chinese interest in deploying ballistic missile submarines (nuclear-powered) (SSBNs) to the Arctic region "as a deterrent against nuclear attacks," although this language did not reappear in the 2020 report.¹⁶ Ryan Martinson has highlighted Chinese military officers who laud the Arctic as a "hiding place" for nuclear submarines.¹⁷

The Chinese government's 2015 defense white paper highlighted the growing role of the People's Liberation Army in protecting China's interests overseas and in "new domains." This document underscores the importance of the maritime domain: "The seas and oceans bear on the enduring peace, lasting stability and sustainable development of China," and "great importance has to be attached to managing the seas and oceans and protecting maritime rights and interests. It is necessary for China to develop a modern maritime military force structure . . . [and] protect the security of strategic SLOCs and overseas interests."¹⁸

A third driver of Chinese interest in the polar regions relates to global climate change. China is clearly interested in gaining a better understanding of the effects of climate change.¹⁹ This interest is manifest in growing scientific research programs in both polar regions. The *National 13th Five-Year Plan for S&T Innovation* demonstrated PRC interest in the important linkages between the polar regions and global climate change. This plan directs the science and technology (S&T) enterprise to "study polar circulation . . . the Antarctic deep ice core records, the evolution of the Arctic cryosphere, and the interaction of atmospheric weather in polar regions and its effects on global

13. "Arctic Natural Resources," National Ocean Economics Program (website), updated August 22, 2017, <https://www.oceaneconomics.org/arctic/NaturalResources/>.

14. C. Todd Lopez, "China Pursues Own Nuclear Triad, Doubling of Nuclear Capability," Department of Defense (website), September 1, 2020, <https://www.defense.gov/News/News-Stories/Article/Article/2333018/china-pursues-own-nuclear-triad-doubling-of-nuclear-capability/>.

15. OSD, *Military and Security Developments 2020*, 45.

16. OSD, *Military and Security Developments Involving the People's Republic of China 2019* (Washington, DC: OSD, 2019), 114.

17. Ryan D. Martinson, "The Role of the Arctic in Chinese Naval Strategy," *China Brief* 19, no. 22 (December 2019): 26–32.

18. State Council Information Office of the PRC, "China's Military Strategy" (white paper, State Council Information Office of the PRC, May 2015).

19. Joint Global Change Research Institute and Batelle Memorial Institute Pacific Northwest Division, *China: Impact of Climate Change to 2030: A Commissioned Research Report*, National Intelligence Council Special Report no. 2009-02D (Washington, DC: National Intelligence Council, 2009).

climate change and China's climate and severe-weather processes."²⁰ Polar science thus provides a window to the future of China's climate.

Polar science is a rich arena in which the Chinese government can build relationships and develop its influence.²¹ As Yun Sun observes, scientific research is a useful justification for access and presence in both polar regions as well as an opportunity to practice science-based diplomacy.²² Yun notes a balancing act between Arctic and Antarctic research. In certain areas, however, the development of common, polar-capable platforms and expertise may produce efficiencies.

The polar regions of the globe are difficult and costly to access, particularly for states that are located far away, like China. Severe weather and the presence of sea ice require costly modifications to ships, aircraft, and submarines. Personnel require special training and equipment. The extra costs associated with polar operations help one to understand the relative importance of the polar regions in PRC and PLA strategy.

Martinson observes the PLA Navy (PLAN) "has formally decided to incorporate Arctic ambitions into its naval strategy," and he notes Chinese scientific research will "help it realize these ambitions."²³ Martinson also states the PLA Navy's strategic concept is evolving to "near seas defense, far seas protection, oceanic presence, and expansion into the two poles." Before the PLA Navy can operate effectively in the polar regions, "a number of scientific and engineering challenges" will have to be overcome.²⁴ Closely examining China's significant polar research programs in the Arctic and Antarctica helps to illustrate how the regions fit into PLA strategy and broader PRC interests.

Arctic

In the Arctic region, the Belt and Road Initiative is a pathway for expanding Chinese activity. Nadège Rolland has described the "overall acceleration and geographic expansion of Chinese overseas activities," including in the polar regions—activities that "will inevitably generate the need for some level of state and military protection."²⁵ In the north, the Arctic Ocean is surrounded by landmasses of North America and Eurasia. The three broad regions of the Arctic are the North American Arctic, including Alaska, the Canadian north, and Greenland; the Scandinavian or Nordic Arctic, including Iceland; and the Russian Arctic. These regions differ in terms of population, infrastructure, development, climate, and other markers. The Arctic coastal states include Canada, Denmark (Greenland), Iceland, Norway, Russia, and the United States. Finland and Sweden also have territory north of the Arctic Circle (66 degrees north latitude).

20. State Council of the PRC, 国务院关于印发“十三五”国家科技创新规划的通知 [State Council notice on the publication of the *National 13th Five-Year Plan for S&T Innovation*], trans. Etcetera Language Group, Inc. (Washington, DC: Center for Security and Emerging Technology, January 8, 2020).

21. Jingchao Peng and Njord Wegge, "China's Bilateral Diplomacy in the Arctic," *Polar Geography* 38, issue 3 (2015): 233–49.

22. Yun, Sun, *China's Arctic Policy*, 1, 3–4.

23. Martinson, "Role of the Arctic."

24. Martinson, "Role of the Arctic."

25. Nadège Rolland, "Securing the Belt and Road: Prospects for Chinese Military Engagement along the Silk Roads," in *Securing the Belt and Road Initiative: China's Evolving Military Engagement along the Silk Roads*, ed. Nadège Rolland (Seattle: National Bureau of Asian Research, September 2019), 2.

The center of the Arctic Ocean contains an area of high seas. As the Belt and Road Initiative develops, the People’s Liberation Army is increasingly linked to protecting this signature program of investment and infrastructure development. Described as a “game changer,” the project is Chinese President Xi Jinping’s signature effort to “increase economic integration and build infrastructure” as well as “to play a larger role in global governance and international affairs by developing a China-centered trading network and system.”²⁶

The 2017 *Arctic Blue Book: Arctic Regional Development Report*, released by the Ocean University of China, laid out three interests supporting the development of the Ice Silk Road: cost savings from shorter Arctic shipping routes, the safe and secure energy resources of the Arctic, and the effects of opening the Arctic on the development of China’s coastal areas—in particular, in the eastern and northern ports.²⁷ Erica Downs has identified additional interests driving investment in Arctic energy projects—specifically, the Yamal LNG project, which involves access to natural gas and opportunities to expand the high-end manufacturing of engineering equipment for liquefied natural gas and opportunities to diversify shipping routes for both economic and strategic reasons.²⁸

The Arctic Ocean is expected to hold significant oil and gas reserves. A 2008 assessment by the US Geological Survey estimated 90 billion barrels of oil, 1,669 trillion cubic feet of gas, and 44 billion barrels of gas liquids may yet be found in the Arctic in addition to the robust fields already producing, such as the Prudhoe Bay Oil Field off northern Alaska.²⁹ Of this rich endowment, the majority (84 percent) is expected to lie offshore. Chinese companies are developing investments and technology relating to Arctic energy resources, including major stakes in the Yamal LNG project, operated by Russia’s Novatek. These Chinese stakes in Yamal belong to the China National Petroleum Corporation (20 percent) and the Silk Road Fund (9.9 percent).³⁰ China Oilfield Services has operated offshore drilling rigs for the last four years in Russian offshore waters under lease to Gazprom.³¹

Minerals are also in abundance in the Arctic. Some significant deposits are already under development. For example, the Norilsk mining centreproject in Siberia produces most of the world’s nickel and palladium and important supplies of copper, and the Red Dog mine in Alaska is one of the world’s largest zinc projects.³² Many areas have not yet been developed, however, including most of Greenland, which has major mineral deposits. These deposits include

26. Guifang (Julia) Xue, “The Potential Dual Use of Support Facilities in the Belt and Road Initiative,” in *Securing the Belt and Road Initiative*, 49.

27. He, Fan, “《北极蓝皮书》：‘冰上丝绸之路’将成为各国合作新增长点” [“Arctic Blue Book”: “Ice Silk Road” will become a new growth point for cooperation between countries], 新华网 [Sohu] (website), November 23, 2018, https://www.sohu.com/a/277370394_267106.

28. Erica Downs, “China-Russia Energy Relations: Better Than Ever,” in *The Emerging Russia-Asia Energy Nexus*, National Bureau of Asian Research Special Report no. 74 (Seattle: National Bureau of Asian Research, 2018), 25–26.

29. Kenneth J. Bird et al., *Circum-Arctic Resource Appraisal: Estimates of Undiscovered Oil and Gas North of the Arctic Circle*, US Geological Survey Fact Sheet no. 2008-3049 (Reston, VA: US Geological Survey, 2008).

30. “About the Project,” Yamal LNG (website), n.d., <http://yamallng.ru/en/project/about/>.

31. Atle Staalesen, “Two Chinese Rigs Prepare for Drilling in Russian Arctic Waters,” *Independent Barents Observer* (website), June 29, 2020, <https://thebarentsobserver.com/en/industry-and-energy/2020/06/two-chinese-rigs-prepare-drilling-russian-arctic-waters>.

32. “Norilsk Mining Centre,” Mining Technology (website), September 9, 2001, <https://www.mining-technology.com/projects/norilsk/>; and “Red Dog,” Teck (website), n.d., <https://www.teck.com/operations/united-states/operations/red-dog/>.

gemstones, gold and platinum, rare earths, and uranium. Chinese companies are active in Arctic mining: Shandong Gold Mining attempted to purchase the Canadian mining company TMAC Resources Inc., which operates the Hope Bay mine in the far north of Canada, but this purchase was rejected by the government of Canada on national security grounds.³³

The world's two most valuable fisheries lie in the Arctic: the Barents Sea off Norway and the Bering Sea between Alaska and Russia. Fish stocks in both areas are moving north as the waters warm, pushing fishing activity toward the central Arctic Ocean.³⁴ China is a signatory of the 2018 Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean, which protects approximately 2.8 million square kilometers of high seas. The agreement placed a moratorium on commercial fishing in the area for 16 years and established a joint program of scientific research aimed at better understanding and providing a scientific basis for managing emerging fisheries in the Central Arctic Ocean.³⁵

The opening of the Arctic Ocean to surface traffic also offers China new trade routes and a faster shipping route between the north Pacific and north Atlantic. But, to date, Chinese companies have shown fairly limited interest in Arctic shipping.³⁶ The China Ocean Shipping Company, Limited is active along the Northern Sea Route, though the level of transits remains low.³⁷

Antarctica

Southern Antarctica is surrounded by the Southern Ocean. Antarctica is protected under international law by the Antarctic Treaty System, a set of treaties that froze all sovereignty claims and protected the continent for scientific research and environmental conservation.³⁸ China, which is a party to the treaty system, is building one of the largest scientific research footprints on the continent.³⁹

Information on Antarctic resource deposits is sketchy. Oil and coal are known to be present, along with various minerals, but no large mineral deposits have been identified.⁴⁰ Most

33. Leona Aglukkaq, "We Need Hope Bay to Succeed," *Nunavut News* (website), September 16, 2020, <https://nunavutnews.com/nunavut-news/we-need-hope-bay-to-succeed-says-leona-aglukkaq/>; and Walter Strong, "Ottawa Blocks Chinese Takeover of Nunavut Gold Mine Project after National Security Review," *CBC News* (website), December 22, 2020, <https://www.cbc.ca/news/canada/north/canada-china-tmac-1.5851305>.

34. Caitlyn Kennedy, "Warming Waters Shift Fish Communities Northward in the Arctic," *Climate.gov* (website), updated July 2, 2021, <https://www.climate.gov/news-features/featured-images/warming-waters-shift-fish-communities-northward-arctic>.

35. "US Signs Agreement to Prevent Unregulated Commercial Fishing on the High Seas of the Central Arctic Ocean," *National Oceanic and Atmospheric Administration Fisheries* (website), updated June 5, 2019, <https://www.fisheries.noaa.gov/feature-story/us-signs-agreement-prevent-unregulated-commercial-fishing-high-seas-central-arctic>.

36. Linyan Huang, Frédéric Lasserre, and Olga Alexeeva, "Is China's Interest for the Arctic Driven by Arctic Shipping Potential?," *Asian Geographer* 32, no. 1 (2015): 59–71.

37. Atle Staalesen, "China's COSCO to Stay Course on Arctic Shipping," *Arctic Today* (website), May 16, 2019, <https://www.arctictoday.com/chinas-cosco-to-stay-course-on-arctic-shipping/>.

38. "Antarctica Shall Be Used for Peaceful Purposes Only," *Secretariat of the Antarctic Treaty* (website), n.d., https://www.ats.aq/index_e.html.

39. Yun, Sun, "Defining the Chinese Threat in the Arctic," *Arctic Institute* (website), April 7, 2020, <https://www.thearcticinstitute.org/defining-the-chinese-threat-in-the-arctic/>.

40. "Mineral Resources," *Discovering Antarctica* (website), n.d., <https://discoveringantarctica.org.uk/challenges/sustainability/mineral-resources/>.

projections of minerals to be found on the continent rely on geological continuities between Antarctica and the parts of South America, South Africa, and Australia that were adjacent during the Mesozoic Era, before tectonic drift carried the continents apart.⁴¹

Antarctic and sub-Antarctic waters contain rich fisheries. Commercially targeted species include krill and toothfish (popularly sold as Chilean sea bass).⁴² These fisheries are difficult to access, and, unsurprisingly, overfishing has occurred. In the 1980s, the marbled rock cod fishery was closed due to overfishing, and, in the 1990s, the toothfish population was also depleted.⁴³ Krill populations are currently in decline, raising concerns about the health of krill-eating species like penguins, whales, and seals. Chinese fishing vessels harvest krill, and the Qingdao Ocean & Fisheries Bureau (Qingdao is a major fish industrial center) has stated, “[C]omprehensive development and utilization of Antarctic marine resources is of great strategic importance.”⁴⁴

Interests Specific to the People’s Liberation Army

The People’s Liberation Army could be called upon to defend China’s interests in the polar regions, including the natural resources and shipping lanes discussed previously. In addition, more globally relevant PLA interests affect the polar regions, particularly in relation to new generations of military technology.

China’s BeiDou Navigation System was completed in June 2020.⁴⁵ The four global navigation satellite systems are China’s BeiDou, Russia’s Soviet Global Navigation Satellite System, the EU’s Galileo, and the United States’ Global Positioning System. Having its own navigation network will enable the People’s Liberation Army to reduce its dependency on US systems. Access to the polar regions for satellite coverage was a key element of achieving this global capability.

High-latitude launch sites are useful for reaching polar orbits or highly elliptical orbits. For example, Russia’s Meridian (originally Molniya) satellites, launched from the high-latitude Plesetsk Cosmodrome, are in highly elliptical orbits, also called Molniya orbits, that give them a long (up to eight-hour) survey over the northern hemisphere.⁴⁶ Coverage of the polar regions is generally impossible or more difficult from geosynchronous orbit.

Surface access to and through the Arctic also offers China a strategic alternative to the “Malacca Dilemma”—the maritime chokepoint through the Strait of Malacca that makes

41. G. P. Thomas, “Antarctica: Mining, Minerals and Fuel Resources,” AZO Mining (website), November 19, 2012, <https://www.azomining.com/Article.aspx?ArticleID=239>.

42. “Antarctic Fisheries,” Antarctic and Southern Ocean Coalition (website), n.d., <https://www.asoc.org/advocacy/wildlife-conservation/southern-ocean-fisheries>.

43. “Antarctic Fisheries.”

44. Mark Godfrey, “Chinese Fishing Firm Seeks to Dominate Antarctic with Massive Trawler,” Seafood Source (website), March 23, 2015, <https://www.seafoodsource.com/news/supply-trade/chinese-fishing-firm-seeks-to-dominate-antarctic-with-massive-trawler>.

45. Ben Westcott, “China’s GPS Rival Beidou Is Now Fully Operational after Final Satellite Launched,” CNN Business (website), June 24, 2020, <https://www.cnn.com/2020/06/24/tech/china-beidou-satellite-gps-intl-hnk/index.html>.

46. “Molniya,” GlobalSecurity.org (website), n.d., <https://www.globalsecurity.org/space/world/russia/molniya.htm>; and “Meridian Satellite Overview,” Spaceflight101.com (website), n.d., <https://spaceflight101.com/spacecraft/meridian-satellite-overview/>.

China vulnerable.⁴⁷ In addition to alternative shipping lanes, the Malacca Dilemma centers on China's energy dependence: Most of its energy imports flow through the Strait of Malacca. Increased sourcing of oil and gas from Russia via the Northern Sea Route therefore offers twofold diversification toward greater energy security. But the usefulness of the Northern Sea Route is limited. As a result, it should not be considered an alternative to the Strait of Malacca.

Access to the Arctic Ocean, whether on or below the surface, would bolster PLA deterrence capabilities, as discussed earlier. Brady draws a connection between China's polar interests and the People's Liberation Army, using military language to describe the polar regions as connected elements in a "third island chain . . . running from the Aleutians in the northernmost Pacific to the southernmost islands of New Zealand and Australia and on down to Antarctica."⁴⁸ This area lies beyond the more familiar first island chain (through Japan) and second island chain (through the Marianas). Brady argues, "China is trying to gain control of the area within the first island chain, is moving to achieve sea denial capabilities in the second island chain, and has plans to go well beyond that zone to the third island chain and into the high seas."⁴⁹

In sum, the People's Republic of China has made clear its interest in polar resources. China may call upon the People's Liberation Army to defend these interests, which have not yet flowered fully. In addition to economic interests, the strategic benefits of operating submarines under Arctic sea ice and the satellite benefits of polar orbits bestow heightened national security relevance upon the polar regions for China.

Steps for Increasing Operational Access and Current Operations and Platforms

Thus far, China's formal governmental presence in the polar regions has been dominated by scientific research, which is both a necessary forerunner to military operations and a useful channel for bilateral and multilateral diplomacy. Research justifies Chinese access and presence, particularly in exclusive economic zones in which the coastal state controls permissions. Research also provides information of potential economic value about resources, conditions, and other actors. China's polar research produces all of these types of useful knowledge. In the context of sharply limited room for maneuvers, given its lack of sovereign territory, the Chinese government naturally emphasizes scientific research in both the Arctic and Antarctic regions.

Another important component of PRC presence in the polar regions is diplomacy. China is a signatory of the Antarctic Treaty System.⁵⁰ In 2013, the Arctic Council granted China observer status.⁵¹ In addition, Beijing signed the 2018 Agreement to Prevent Unregulated

47. Marc Lanteigne, "China's Maritime Security and the 'Malacca Dilemma,'" *Asian Security* 4, no. 2 (2008): 143–61.

48. Brady, *Polar Great Power*, 73.

49. Brady, *Polar Great Power*, 75.

50. "Parties," Secretariat of the Antarctic Treaty (website), n.d., <https://www.ats.aq/devAS/Parties>.

51. "Observers," Arctic Council (website), n.d., <https://arctic-council.org/en/about/observers/>.

High Seas Fisheries in the Central Arctic Ocean.⁵² China is also party to other international agreements that involve the Arctic and Antarctic. Participation in multilateral, diplomatic institutions and agreements legitimates PRC involvement in the polar regions. Yet strong, sovereign states in the Arctic have traditionally sought to maintain their primacy in regional governance; as a result, China's involvement has been met with some wariness.⁵³

Recent and Ongoing Operations and Capabilities

China's scientific research in the polar regions is directed by the Chinese Arctic and Antarctic Administration, which is part of the Ministry of Natural Resources.⁵⁴ The administration is responsible for forming China's polar development strategy, guidelines, and policies, including research plans; developing laws, regulations, standards, and other guidance to oversee polar affairs; organizing and coordinating polar research, communications, and foreign affairs; and disseminating scientific knowledge.⁵⁵

Also part of the Ministry of Natural Resources, the Polar Research Institute of China operates icebreakers in the Arctic Ocean and the Southern Ocean around Antarctica. The institute leads Chinese scientific research in both the Arctic and Antarctica.

The Ministry of Natural Resources was created in 2018, when Beijing dissolved the Ministry of Land and Resources, which had included the State Oceanic Administration. The Ministry of Natural Resources oversees the Polar Research Institute of China and several oceanographic institutions that conduct overseas scientific research. In their 2018 maritime report detailing the global range of China's scientific research vessels, Ryan Martinson and Peter Dutton describe PRC investment in marine scientific research "on a massive scale."⁵⁶ Though several Chinese agencies, research institutes, and universities own and operate oceanographic research vessels, the Ministry of Natural Resources oversees some of the most significant, including the Polar Research Institute of China; the First, Second, and Third Institutes of Oceanography; and regional bureaus in the north, east, and south.⁵⁷ China's National Marine Research Fleet comprises 18 distant-ocean vessels, and the China Geological Survey Fleet comprises five distant-ocean survey vessels.⁵⁸

52. Office of International Affairs, Trade, and Commerce, "US Signs Agreement to Prevent Unregulated Commercial Fishing on the High Seas of the Central Arctic Ocean," National Oceanic and Atmospheric Administration Fisheries (website), updated June 5, 2019, <https://www.fisheries.noaa.gov/feature-story/us-signs-agreement-prevent-unregulated-commercial-fishing-high-seas-central-arctic>.

53. Gisela Grieger, *China's Arctic Policy: How China Aligns Rights and Interests*, Briefing no. PE 620.231 (Brussels: European Parliamentary Research Service, May 2018).

54. Sen, Wang, "China's Antarctic Program and the Antarctic Treaty System," Italian Institute for International Political Studies (website), July 19, 2019, <https://www.ispionline.it/en/publicazione/chinas-antarctic-program-and-antarctic-treaty-system-23526>.

55. Yun Sun, *China's Arctic Policy*, 5.

56. Ryan D. Martinson and Peter A. Dutton, *China's Distant-Ocean Survey Activities: Implications for US National Security*, China Maritime Report no. 3 (Newport, RI: China Maritime Studies Institute, November 2018), 1–3.

57. Martinson and Dutton, *Distant-Ocean Survey Activities*, 2.

58. Martinson and Dutton, *Distant-Ocean Survey Activities*, 3–4.

Icebreakers

China's small but growing polar icebreaker fleet reflects a steady increase in capabilities. The PLA Navy also operates two small Type 272 icebreakers in the North Sea Fleet that keep ports open along the Bohai Sea, but these ships are not polar-capable.⁵⁹ Although the first icebreaker, the MV *Xue Long*, was purchased from Ukraine, the second, the MV *Xue Long 2*, was built domestically from a Finnish design. Two more icebreakers appear to be in development: one, a domestically designed icebreaker featuring a hybrid diesel-and-natural-gas propulsion system, and the other, a nuclear-powered icebreaker.⁶⁰ The trajectory of China's growing polar-icebreaker capacity is clear.

The first Chinese polar icebreaker, the *Xue Long*, was built in 1993 at Kherson Shipyard in Ukraine.⁶¹ The *Xue Long* was an icebreaking cargo vessel China modified to serve as a polar research vessel.⁶² The Chinese government completed another round of extensive, science-focused upgrades in 2007. The *Xue Long* has advanced automation, navigation, and communications systems. The highly capable vessel has a length of 167 meters and a top speed of 17 knots.⁶³ The *Xue Long* features atmospheric, hydrologic, and biologic data processing; meteorological forecasting; and laboratories for a variety of marine sciences. The vessel has three winches; a water sampler for conductivity, temperature, and depth; and an acoustic Doppler current profiler to sample fish populations.⁶⁴ The *Xue Long* suffered damage in January 2019 when the ship collided with an iceberg while transiting through the Amundsen Sea en route to Antarctica.⁶⁵ The vessel's mast was broken, and the bulwark suffered damage.

China's first domestically built polar icebreaker, the *Xue Long 2*, entered service in 2019. In a joint project, the world's leading icebreaker design firm, Aker Arctic of Finland, designed the vessel, and the China State Shipbuilding Corporation built it at the Jiangnan Shipyard in Shanghai. The *Xue Long 2* was designed for scientific research. The vessel has a length of 122.5 meters, a breadth of 22.3 meters, and a draft of 8.3 meters.⁶⁶ The *Xue Long 2*, which is rated Polar Class 3, can break 1.5 meters of ice at two to three knots. The design of this icebreaker includes many features specially included for scientific research, including large cranes, a modular deck design, a large scientific research room, and a box keel to protect scientific equipment from ice pieces.⁶⁷ The *Xue Long 2* also carries remotely operated, unmanned vehicles.⁶⁸

59. Franz-Stefan Gady, "China Begins Construction of Polar Icebreaker," *Diplomat* (website), December 22, 2016, <https://thediplomat.com/2016/12/china-begins-construction-of-polar-icebreaker/>.

60. Malte Humpert, "China Reveals Details of Newly Designed Heavy Icebreaker," *High North News* (website), December 16, 2019, <https://www.highnorthnews.com/en/china-reveals-details-newly-designed-heavy-icebreaker>.

61. "Xue Long, IMO 8877899," *BalticShipping.com* (website), n.d., <https://www.balticshipping.com/vessel/imo/8877899>.

62. "AGB Xuelong/Snow Dragon," *GlobalSecurity.org* (website), n.d., <https://www.globalsecurity.org/military/world/china/agb-xuelong.htm>.

63. "AGB Xuelong."

64. "Party: China," Secretariat of the Antarctic Treaty Electronic Information Exchange System (website), n.d., <https://eies.ats.aq/Report/GenRpt?idParty=9&period=3&idYear=0&lang=e>.

65. "Chinese Polar Research Ship Damaged after Hitting Iceberg in Antarctica," *ABC News* (website), January 22, 2019, <https://www.abc.net.au/news/2019-01-23/chinese-icebreaker-damaged-after-hitting-iceberg-in-antarctica/10738848>.

66. "Xue Long 2," *Aker Arctic* (website), n.d., <https://akerarctic.fi/en/reference/xue-long-2/>.

67. "Xue Long 2."

68. "Party: China."

In December 2019, the China Shipbuilding Industry Corporation presented an icebreaker model that may offer insight into the future of Chinese icebreaking. This Polar Class 2 model features diesel and natural-gas power systems, enabling the vessel to switch to cleaner propulsion in sensitive polar waters.⁶⁹ This large vessel has 26,000 tons of displacement and the ability to break three-meter ice at two knots. The vessel will also feature dual directional icebreaking, advanced scientific research facilities, and the capacity to carry two helicopters.

China's first nuclear-powered icebreaker is also in the works, and it has drawn a great deal of attention. In late 2019, Trym Aleksander Eiterjord provided a roundup of various reports on the new vessel.⁷⁰ In June 2018, Eiterjord notes, the China National Nuclear Corporation issued the tender for a "nuclear-powered icebreaker and comprehensive support vessel demonstration project" to be designed and built by a qualified institution licensed to participate in Chinese defense industry projects. The reactor will be designed by the China National Nuclear Corporation, which has three marine reactor designs: the ACP100S, ACP25S, and ACP10S. Shanghai Jiao Tong University, which has won the contract, is partnering with the China National Nuclear Corporation and the Shanghai Nuclear Power Office through the Research Institute for Nuclear-Powered Ships and Maritime Equipment, which the three institutions established in March 2019.⁷¹ The China National Nuclear Corporation signed a cooperation agreement with the China State Shipbuilding Corporation in 2016 and reportedly visited the Bohai Shipbuilding Heavy Industry Co. shipyard, where China's nuclear submarines are built, in 2018.⁷² Many observers have connected the nuclear icebreaker to China's eventual construction of nuclear aircraft carriers.⁷³ The *Hanhai Langshan* blog makes this connection, describing the vessel as featuring "up to 40,000 tons" of displacement and three-meter icebreaking.⁷⁴ The vessel is expected to be constructed at the Jiangnan Shipyard, where the *Xue Long 2* was built.

Arctic

The PLA Navy has not yet established a presence in the Arctic. But, in 2015, a group of five PLAN vessels was seen in the Bering Sea, near the Aleutian Islands, which stretch west from Alaska.⁷⁵ The group of vessels was composed of three combat ships, an amphibious ship, and a replenishment vessel, all of which remained in international waters.⁷⁶ In addition, a small group of PLAN vessels cruised the Baltic Sea in 2017 and took part in joint exercises with Russia. The small group included a destroyer (Type 052D), a frigate, and a supply ship.⁷⁷ In addition to

69. Humpert, "China Reveals."

70. Trym Aleksander Eiterjord, "Checking in on China's Nuclear Icebreaker," *Diplomat* (website), September 5, 2019, <https://thediplomat.com/2019/09/checking-in-on-chinas-nuclear-icebreaker/>.

71. Eiterjord, "Checking in."

72. Eiterjord, "Checking in."

73. Malte Humpert, "China to Use First Atomic Icebreaker as Test for Future Nuclear Aircraft Carriers," *High North News* (website), December 30, 2019, <https://www.highnorthnews.com/en/china-use-first-atomic-icebreaker-test-future-nuclear-aircraft-carriers>.

74. Eiterjord, "Checking in."

75. Agence France-Presse, "Pentagon: 5 Chinese Naval Ships Spotted in Bering Sea," *Defense News*, September 2, 2015.

76. Agence France-Presse, "Naval Ships Spotted."

77. "China in Baltic Navy Drill with Russia," *BBC News* (website), July 21, 2017, <https://www.bbc.com/news/world-europe-40682442>.

conducting exercises off Kaliningrad with Russian naval elements, the PLAN ships conducted port calls, including in Helsinki, Finland (the author was in Helsinki at the time and witnessed the visit).⁷⁸ Also, in 2021, four PLAN ships were spotted in the Bering Sea near the Aleutian Islands (off the coast of Alaska), apparently still in international waters.⁷⁹

Though PLA operations remain few and far between in Arctic-adjacent waters like the Baltic and Bering, China is building a powerful scientific research program in the Arctic. The small Nordic countries are the primary focus of this effort. The Polar Research Institute of China hosts the China-Nordic Arctic Research Center, based in Shanghai. Established in 2013, this research center is a collaboration between four Chinese and six Nordic research institutes that “have capacities to influence and coordinate Arctic research.”⁸⁰ The center focuses on joint research on climate change impacts, Arctic resources and shipping, and Arctic policy and legislation. In addition to the multilateral model of Chinese scientific cooperation with the Nordics, Beijing has developed bilateral research ventures with Iceland, Russia, and Sweden. Cooperative ventures are also in the works with Finland and Greenland.

The China Iceland Arctic Research Observatory in Kárhóll, Iceland, formally opened in October 2018.⁸¹ Originally intended to serve as an aurora observatory, the facility has broadened its focus to conduct research in additional fields of polar science. Research areas include upper atmosphere observations, space weather, geomagnetic field studies, climatology, and glaciology. The observatory is a joint effort between the Polar Research Institute of China and the Icelandic Centre for Research.⁸²

In Kiruna, northern Sweden, the China Remote Sensing Satellite North Polar Ground Station has been in operation since 2016.⁸³ A project of the Chinese Academy of Sciences—specifically, the Institute of Remote Sensing and Digital Earth—the Kiruna station is China’s first fully owned, overseas, satellite ground station. This project adds to joint ventures in Africa and South America that also provide satellite facilities to Beijing. The new station has drawn criticism from Swedish defense experts, who note its data could have military applications.⁸⁴

Progress in joint Sino-Finnish Arctic research appears to have stalled since a 2018 agreement to establish a joint research center for space observation and data sharing in Sodankylä (work that

78. “Watch: Chinese Navy Ships Dock in Helsinki – Open to Public on Wednesday,” Yle (website), August 1, 2017, <https://yle.fi/news/3-9751287>.

79. Web Desk, “China’s Most Advanced Warship Entered US EEZ near Alaska?,” *Week* (website), September 14, 2021, <https://www.theweek.in/news/world/2021/09/14/china-most-advanced-warship-entered-us-eez-near-alaska.html>.

80. “Background,” China-Nordic Arctic Research Center (website), n.d., <https://www.cnarc.info/organization>.

81. “About the CIAO,” China-Iceland Arctic Observatory (website), n.d., <https://karholl.is/>.

82. “China-Iceland Arctic Observatory Formally Opened,” Arctic Portal (website), October 18, 2018, <https://arcticportal.org/ap-library/news/2059-china-iceland-arctic-observatory-formally-opened>.

83. Stephen Chen, “China Launches Its First Fully Owned Overseas Satellite Ground Station Near North Pole,” *South China Morning Post* (website), December 16, 2016, <https://www.scmp.com/news/china/policies-politics/article/2055224/china-launches-its-first-fully-owned-overseas-satellite>.

84. Sharon Jåma and Diana Olofsson, “Swedish Security Experts: We’re Too Naive about China,” SVT Nyheter (website), January 15, 2019, <https://www.svt.se/nyheter/utrikes/swedish-security-experts-we-re-too-naive-about-china>.

is also being done through China's Institute of Remote Sensing and Digital Earth).⁸⁵ The project does not appear to have advanced further.

Reporting by a small number of sources indicates a Chinese scientific presence in Greenland. The state-owned telecommunications utility TELE Greenland A/S was reportedly approached about establishing a satellite ground-receiving station in Nuuk.⁸⁶ In May 2017, another source reported a launch ceremony was held in Kangerlussuaq, Greenland, for the joint satellite project that included representatives from Beijing Normal University, TELE Greenland, and the Greenland Institute of Natural Resources.⁸⁷ The project reportedly involved a seven-meter antenna to be installed alongside existing equipment in Nuuk. According to other reports, Chinese and Greenlandic authorities have signed a joint declaration of intent on research in support of the Polar Research Institute of China constructing a large research station in northern Greenland for environmental research.⁸⁸

In 2019, an agreement to establish the Chinese-Russian Arctic Research Center was signed by representatives of the Shirshov Institute of Oceanology at the Russian Academy of Sciences and the Qingdao National Laboratory for Marine Science and Technology.⁸⁹ But Sino-Russian research cooperation in the Arctic may be complicated by the February 2020 arrest of Valery Mitko, president of the Arctic Academy of Sciences in St. Petersburg, Russia. Professor Mitko was accused of passing to Chinese intelligence a document containing state secrets about hydroacoustics.⁹⁰ The allegations of spying illustrate the ongoing tension between Russia and China as they develop cooperation in the Arctic around shared energy and shipping interests. A growing Chinese submarine presence in the Arctic may remain a source of tension.

China also operates an independent research program in the Arctic outside these bilateral and multilateral efforts. The Polar Research Institute of China maintains a scientific research station in the Svalbard archipelago, which belongs to Norway. The Yellow River Station, at 78 degrees latitude, was founded in 2004 in Ny-Ålesund, Svalbard.⁹¹ The Yellow River Station is on the same magnetic field line as the Zhongshan Station in Antarctica, making these two stations important locations for conjugate observations of auroral phenomena. Other observations may be useful between field-line stations, which facilitate the study of charged particles in the

85. Xinhua, "China, Finland to Enhance Arctic Research Cooperation," Chinese Academy of Sciences (website), October 31, 2018, http://english.cas.ac.cn/Special_Reports/Belt_of_Science_Road_for_Cooperation/Technology_Cooperation/201810/t20181029_200564.shtml; and Timo Koivurova et al., *China in the Arctic and the Opportunities and Challenges for Chinese-Finnish Arctic Cooperation*, Publication Series of the Government's Analysis, Assessment and Research Activities no. 8/2019 (Helsinki: Prime Minister's Office, February 2019).

86. Andreas Lindqvist, "Nyt kinesisk satellitprojekt kører under radaren" [Now the satellite project is under radar], *Sermitsiaq AG* (website), December 8, 2017, <https://sermitsiaq.ag/nyt-kinesisk-satellitprojekt-koerer-radaren>.

87. "Greenland: China Discreetly Launches Satellite Ground Station Project," *Jichang Lulu* (blog), December 14, 2017, <https://jichanglulu.wordpress.com/2017/12/14/greenland-satellite/>.

88. Martin Breum, "Kina vil bygge kontroversiel forskningsstation i Grønland" [China will build controversial research station in Greenland], *Information* (website), October 18, 2017, <https://www.information.dk/udland/2017/10/kina-bygge-kontroversiel-forskningsstation-groenland>.

89. Pavel Devyatkin, "Russian and Chinese Scientists to Establish Arctic Research Center," *High North News* (website), April 15, 2019, <https://www.highnorthnews.com/en/russian-and-chinese-scientists-establish-arctic-research-center>.

90. Mary Ilyushina, "Russia Accuses Leading Arctic Researcher of Spying for China," *CNN* (website), June 17, 2020, <https://www.cnn.com/2020/06/17/europe/russia-china-spying-allegation-intl/index.html>.

91. Torbjorn Pedersen, "The Politics of Research Presence in Svalbard," *Polar Journal* 11, no. 2 (2021): 413–26.

magnetosphere (for a helpful explanation, see the archived questions and answers maintained by the NASA Goddard Space Flight Center).⁹² Research at the Yellow River Station focuses on upper atmosphere physics, glaciology, marine biology, and other fields of environmental science.⁹³

Antarctic

The Chinese Arctic and Antarctic Administration is responsible for PRC participation in the Antarctic Treaty System. The Polar Research Institute of China handles logistics and scientific research operations. In addition, the institute operates four research stations in Antarctica, and a fifth is under construction. Chinese military assets are also used to resupply and operate Antarctic research stations. This operational support includes polar-capable aviation and specialized personnel.⁹⁴ See table 5-1 for information on China's four Antarctic research stations.⁹⁵

	Great Wall Station	Kunlun Station	Zhongshan Station	Taishan Station
Schedule	Year-round	Seasonal	Year-round	Seasonal
Year Founded	1985	2009	1989	2014
Facilities	25 buildings, 4,200 square meters	556 square meters	15 buildings, 2,700 square meters	300 square meters
Staffing	60 personnel in summer, 20 in winter	20–24 personnel in summer	80 personnel in summer, 25 in winter	5 personnel for 60 days and 25 people for 4 days
Location	King George Island, West Antarctica	Dome A area	Larsemann Hills	Grove Mountains (serves as a relay point between Zhongshan Station and Kunlun Station)

Table 5-1. China's Antarctic research stations

China operates three Global Positioning System tracking stations: Zhongshan Station, Kunlun Station, and Great Wall Station. Other facilities include six weather stations, six passive seismic monitors, five ecological facilities, three aurora observatories, three geomagnetic observatories, a tide gauge, and a facility for ionospheric sounding of radio waves.⁹⁶ Though they gather data, these installations are much smaller than research stations, which represent major investments.

92. David P. Stern and Mauricio Peredo, "Get a Straight Answer," Polar, Wind, and Geotail Project (website), updated November 9, 2003, <https://pwg.gsfc.nasa.gov/Education/FAQs5.html>.

93. "China Arctic Science Research Station," Polar Research Institute of China (website), n.d., <https://www.pric.org.cn/EN/detail/content.aspx?id=3171277c-53b4-435b-b50a-b7588caeab55> (page discontinued).

94. Anne-Marie Brady, *China's Expanding Antarctic Interests: Implications for New Zealand*, Small States and the New Security Environment Policy Brief no. 2 (Canterbury, NZ: University of Canterbury, 2017).

95. "Party: China."

96. "Party: China."

In 2018, *China Daily* reported a fifth Antarctic research station had begun construction on Inexpressible Island, near the Ross Sea. The article describes the station as a year-round station that will support research on environmental conditions, observation and monitoring, and marine surveys.⁹⁷

China operates the Snow Eagle 601 (Xue Ying 601), the country's first fixed-wing, polar aircraft.⁹⁸ The Snow Eagle is a modified DC-3 aircraft (also called BT-67), retrofitted in the United States and Canada to be equipped with skis and optimized for scientific experiments.⁹⁹ Several modified DC-3 aircraft are currently operating in Antarctica in logistical and scientific roles.¹⁰⁰ The Snow Eagle first landed in Antarctica in 2016, after the construction of a snow runway at the Kunlun Station.¹⁰¹

The Centre for Southern Hemisphere Oceans Research is a joint Sino-Australian research center established in 2017 and aimed at studying the Southern Ocean.¹⁰² The center represents a team effort among China's Qingdao National Laboratory for Marine Science and Technology, Australia's Commonwealth Scientific and Industrial Research Organisation, the University of New South Wales, and the University of Tasmania.

Future Capabilities and Operations

The challenges of operating in polar conditions—coldness, darkness, severe weather, and limited infrastructure and communications—make these areas interesting test beds for the deployment of new technologies. The scarcity of supporting infrastructure also encourages alternative technologies, such as self-sustaining, nuclear-powered systems.

Unmanned systems hold appeal in the polar regions because the systems reduce the need for human presence. China joins other nations in developing unmanned systems for polar applications. During the ninth Chinese National Arctic Research Expedition in 2018, the *Xue Long* deployed a high-efficiency underwater glider, the *Haiyi*, that operated for 45 days, covered 930 kilometers, and took 229 temperature and salinity profiles.¹⁰³ In addition, the expedition deployed an unmanned ice station, built by the Polar Research Institute of China, that provides sea-ice data. The scientific writeup of the expedition noted, “For the first time, unmanned observational equipment such as the

97. “China’s 5th Antarctic Research Station to Begin Construction,” *China Daily* (website), January 17, 2018, <http://www.chinadaily.com.cn/a/201801/17/WS5a5ee960a310e4ebf433e4ef.html>.

98. Xinhua, “China’s 35th Antarctic Expedition Fruitful,” China Central Television (website), March 8, 2019, <http://english.cctv.com/2019/03/09/ARTIyRUKsJEkWHsyJsHsJqfz190309.shtml>; and Alexandra Witze, “Chinese Crew Extract First Rock from Beneath East Antarctic Ice in 60 Years,” *Nature* (website), March 5, 2019, <https://www.nature.com/articles/d41586-019-00659-z>.

99. Xiangbin Cui et al., “The First Fixed-Wing Aircraft for Chinese Antarctic Expeditions: Airframe, Modifications, Scientific Instrumentation and Applications,” *Journal of Environmental and Engineering Geophysics* 23, no. 1 (2018): 1–13.

100. Xiangbin Cui et al., “Fixed-Wing Aircraft.”

101. Xinhua, “Antarctic Diary: China’s Snow Eagle Lands on Highest Dome A, Makes History,” Xinhuanet (website), January 10, 2017, http://www.xinhuanet.com/english/2017-01/10/c_135970512.htm.

102. “The Centre for Southern Hemisphere Oceans Research,” Centre for Southern Hemisphere Oceans Research (website), n.d., <https://cshor.csiro.au/>.

103. Wei Zexun et al., “中国第9次北极考察概述” [Overview of the 9th Chinese National Arctic Research Expedition], *大气和海洋科学快报* [*Atmospheric and Oceanic Science Letters*] 13, no. 1 (October 2019): 1–7.

unmanned ice station, the glider, and the climbing marine profile buoys, developed independently by China, were deployed in such an expedition, which greatly enhanced our ability to observe and monitor the Arctic environment.”¹⁰⁴ Notably, similar systems are also being deployed by the United States and Russia (for example, the Seaglider system developed by the University of Washington with funding from the Office of Naval Research and Russia’s development of unmanned aerial vehicles for military and scientific purposes).¹⁰⁵

As discussed in an earlier section, a Chinese nuclear-powered icebreaker appears to be in development. This project will extend China’s capacity to operate scientific research programs in the polar regions. In addition, the project could provide additional expertise and testing to support the domestic development of a nuclear-powered aircraft carrier.

Brady has argued Chinese SSBNs operating in the Arctic could bolster Beijing’s deterrence capability and strengthen its ability to target American and Russian missile defense systems in the Arctic.¹⁰⁶ The PLA Navy, which currently operates four *Jin*-class (Type 094) SSBNs, is constructing two more—the next-generation Type 096 SSBNs will begin construction in the early 2020s.¹⁰⁷

China continues to develop its scientific research footprint in the Arctic and Antarctic. The *13th Five-Year Plan for Economic and Social Development of the People’s Republic of China (2016–2020)* established a set of projects under the rubric of “Safeguarding Maritime Rights and Interests” and “Maritime Projects.” The polar exploration category includes:

- Establish a new shore-based Arctic observation station through cooperation.
- Establish a new Antarctic research station.
- Build new advanced icebreakers.
- Improve Antarctic aviation capabilities.
- Complete the basic framework for a land-sea-air observation platform in the polar regions.
- Research and develop exploration technology and equipment suitable to the polar environments.
- Establish a service platform for the provision and application of information regarding the polar environments and potential polar resources.¹⁰⁸

104. Wei Zexun et al., “National Arctic Research Expedition.”

105. Sandra Hines, “Unmanned Seagliders Give Researchers a Long Look under the Sea,” *University of Washington Magazine* (website), n.d., <https://magazine.washington.edu/feature/unmanned-seagliders-give-researchers-a-long-look-under-the-sea/>; and Thomas Nilsen, “This Is Russia’s New Unique Underwater Drone for Arctic Waters,” *Independent Barents Observer* (website), July 12, 2016, <https://thebarentsobserver.com/ru/node/958>.

106. Anne-Marie Brady, “Facing Up to China’s Military Interests in the Arctic,” *China Brief* 19, no. 21 (2019).

107. OSD, *Military and Security Developments 2020*, 45.

108. Central Committee of the PRC, *The 13th Five-Year Plan for Economic and Social Development of the People’s Republic of China, 2016–2020*, trans. Compilation and Translation Bureau (Beijing: Central Compilation and Translation Press, 2016), 117–19.

These priorities find further support in the *National 13th Five-Year Plan for S&T Innovation* that identifies the development of “key core technologies” for the polar regions.¹⁰⁹ Chapter seven of this plan focuses on “Developing Technology Systems to Protect National Security and Strategic Interests,” clustering polar S&T priorities into three areas: climate change, which emphasizes the impact on “climate and severe weather in China”; resources, including hydrocarbons, minerals, fisheries, and their “resource potential and commercial value”; and polar observations, including equipment, automated networks, and international cooperation to “improve China’s polar scientific research level.”¹¹⁰ In addition, the S&T plan prioritizes “China-led large-scale international cooperation plans for polar regions,” including long-term observation programs in the Arctic and Antarctica, to “enhance China’s influence and voice in polar geopolitics.”¹¹¹ These priorities find further support in the *Five-Year Plan for Strategic Emerging Industries* that lists the technical means required to achieve the S&T priorities.¹¹²

Conclusion

In a September 2020 speech at a science forum convened to gather input on the 14th Five-Year Plan, Xi Jinping reminded his audience, “Science has no borders, but scientists have motherlands.”¹¹³ This phrase is a reminder of the inseparable connections within the PRC science enterprise that cut across government institutions, universities, corporations, and other elements. Xi elaborated, “I hope that S&T workers at large do not forget their original intention, keep their mission firmly in mind, adhere to the supremacy of the national interest . . . and merge their own scientific pursuits into the magnificent undertaking of building a modern socialist country.”¹¹⁴

Brady offers a three-part framework for understanding China’s Arctic interests: security (specifically, nuclear deterrence), natural resources, and strategic S&T, including the BeiDou Navigation Satellite System.¹¹⁵ China’s Antarctic interests are more limited due to the protected nature of Antarctica, but they generally track along similar lines: future resource development, should the Antarctic Treaty System evolve in a more permissive direction; strategic science by providing access to space and polar satellite coverage; and security, which can be conceived broadly in the Antarctic context. Antarctica is an undeveloped continent, rich in mineral wealth, that is unique under international law. The possibility the international community will not be able to maintain its protected status and the Antarctic Treaty System might fail means the People’s Republic of China must maintain a presence in Antarctica. Beijing is not likely to seek the collapse of the

109. State Council of the PRC, *Notice on the publication*.

110. State Council of the PRC, *Notice on the publication*, 38–42.

111. State Council of the PRC, *Notice on the publication*, 41.

112. State Council Information Office of the PRC, 国务院关于印发“十三五”国家战略性新兴产业发展规划的通知 [National 13th five-year plan for the development of strategic emerging industries], trans. Etcetera Language Group, Inc. (Washington, DC: Center for Security and Emerging Technology, December 2019), 17, 24, 32.

113. State Council Information Office of the PRC, *Strategic emerging industries*.

114. Xi Jinping, “在科学家座谈会上的讲话” [Speech at a scientists’ forum], trans. Rogier Creemers et al. (speech, scientists’ forum, China, September 11, 2020), <https://www.newamerica.org/cybersecurity-initiative/digichina/blog/translation-xi-jinpings-sept-2020-speech-science-and-technology/>.

115. Brady, “China’s Military Interests.”

Antarctic Treaty System. Rather, Beijing's chief interests on the continent are likely related to space, prestige, and hedging.

Much has been made of Chinese interests in the Arctic region, which the dominant discourse frames as negative and dangerous.¹¹⁶ During a 2020 hearing, Senator Angus King asked General Terrence O'Shaughnessy, then-commander of United States Northern Command and North American Aerospace Defense Command, "What does China want?" General O'Shaughnessy responded by warning of potential "nefarious" activity, describing the Arctic as an avenue of approach for China.¹¹⁷

Other interpretations are more encouraging of Beijing's investment in the region. Some experts take a neutral position. Elizabeth Wishnick has observed China's economic interests in the Arctic are practically limited: "Chinese shipping predominantly relies on its own southern ports, and China imports resources from areas south of the equator." Furthermore, "[M]ost of China's trade with Europe requires containers, and, at present, Arctic shipping is not ideal for container shipping (since it requires precise delivery dates, which are not possible due to unpredictable weather conditions in the Arctic)."¹¹⁸

The polar regions are a part of the ongoing debate over China's rise and ambitions. A diverse range of opinions has emerged from the widespread commentary and analysis taking place in the United States, Europe, and beyond. Brady's 2017 book, *China as a Polar Great Power*, directed widespread attention to China's activities in both the Arctic and Antarctica. Brady argues, "China has a long-term agenda in the polar regions" that centers on gaining access and influence.¹¹⁹

Though the polar regions are not China's top priorities, these regions are important enabling sites and strategic geographies. The legal regimes that govern access in Antarctica and the Arctic and the types of activities permitted in the two regions differ markedly. The two regions, however, share the qualities of strategic natural resources, strategic access to space and polar orbits, opportunities for science diplomacy, global prestige, and information about the future of climate change.

Currently, PLA operations in the polar regions are in their infancy. Vessels of the PLA Navy have visited Arctic-adjacent waters in the Bering Sea and the Baltic Sea. Chinese military assets have also supported scientific efforts in Antarctica. However, signs indicate the People's Liberation Army is preparing to mobilize greater presence and expanded operations in the polar regions. China is developing S&T to enable a broader and deeper role for its military, including advanced icebreakers, polar-capable submarines, advanced environmental monitoring data, and research stations with developed infrastructure.

116. Somini Sengupta and Steven Lee Myers, "Latest Arena for China's Growing Global Ambitions: The Arctic," *New York Times*, May 24, 2019; Kris Osborn, "China Has Big Plans to Dominate the Arctic," *National Interest*, January 22, 2021; Brady, "China's Military Interests"; and Laura Leddy and Devin Lurie, "China's Arctic Endgame," American Security Project (website), July 7, 2020, <https://www.americansecurityproject.org/chinas-arctic-endgame/>.

117. Office of Senator Angus King, "Senator King Warned of 'Nefarious' End Game of China in Arctic, Russian Alliance in Region," press release, February 13, 2020, <https://www.king.senate.gov/newsroom/press-releases/senator-king-warned-of-nefarious-end-game-of-china-in-arctic-russian-alliance-in-region>.

118. Elizabeth Wishnick, *China's Interests and Goals in the Arctic: Implications for the United States* (Carlisle, PA: Strategic Studies Institute, US Army War College Press, March 2017), 28, <https://press.armywarcollege.edu/monographs/295/>.

119. Brady, *Polar Great Power*, 8.

China's next overseas base will not be in the polar regions, which remain beyond the immediate PLA and PRC priority areas. Significant limitations impede the People's Liberation Army's freedom of action in both the Arctic and Antarctica. Nevertheless, continuing to monitor China's growing polar presence and understanding the likely trajectory of the nation's growing capabilities are vital.

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China's Activities in the Pacific Island Countries: Laying the Foundation for Future Access in Oceania?

April Herlevi and Christopher Cairns

Introduction

The People's Liberation Army (PLA) has expanded its global presence and is enacting guidance set forth under Xi Jinping's overarching maritime development strategy. In official governmental documents of the People's Republic of China (PRC), the State Council and related entities refer to the overall goals as “developing the maritime economy” (发展海洋经济) or “constructing maritime power” (建设海洋强国).¹ The PLA Navy (PLAN) is enacting the “strategic requirements of near seas defense, far seas protection” (近海防御, 远海护卫的战略要求).² Inherent in China's maritime and naval strategy are conceptualizations of island chains in the Pacific. The boundaries of the second island chain (SIC) do not perfectly align with some aspects of China's maritime strategy, but two concepts have particular significance in PLA thinking: benchmarks and barriers. Benchmarks represent the progress the People's Liberation Army has made in expanding its operations, and barriers are elements that limit China's activities and future operational access.

The People's Liberation Army has particular views about benchmarks and barriers in the SIC, but these views are mediated through at least two filters. The first filter is the strategic objectives of the PRC government, which have a strong economic dimension. One of these economic objectives is an effort “to jointly build the blue economic passage of [the] China-Oceania-South Pacific” under the purview of the Belt and Road Initiative (一带一路). In the *Vision for Maritime Cooperation under*

1. National Development and Reform Commission and Ministry of Natural Resources, 关于发展海洋经济 加快建设海洋强国工作情况的报告 [Report on the development of the marine economy and the acceleration of the construction of a maritime power], ed. Feng Tao (Beijing: Ministry of Natural Resources, December 24, 2018); Ryan D. Martinson, “Panning for Gold: Assessing Chinese Maritime Strategy from Primary Sources,” *Naval War College Review* 69, no. 3 (2016): 1–24; Liza Tobin, “Underway: Beijing's Strategy to Build China into a Maritime Great Power,” *Naval War College Review* 71, no. 2 (2018); and Toshi Yoshihara and James R. Holmes, *Red Star over the Pacific: China's Rise and the Challenge to US Maritime Security*, 2nd ed. (Annapolis, MD: Naval Institute Press, 2018).

2. Xinhuanet, “海军逐步实现近海防御型向近海防御与远海护卫型结合转变” [Navy has gradually realized the transformation from near-seas defense to a combination of near-seas defense and far-seas protection], 新华网 [Xinhuanet], May 26, 2015, http://www.xinhuanet.com/mil/2015-05/26/c_127842905.htm; and David M. Finkelstein, *Get Ready for the Second Phase of Chinese Military Reform*, DOP 2017-U-014677 (Arlington, VA: CNA, January 2017).

the Belt and Road Initiative, the economic passage is described as extending “southward from the South China Sea into the Pacific Ocean,” but exact locations are not specified.³

The second filter through which PLA activities are refined is the objectives of the Pacific Island countries (PICs) themselves. The PICs included in this analysis are the Commonwealth of the Northern Mariana Islands, the Cook Islands, Guam, the Federated States of Micronesia, Fiji, French Polynesia, Kiribati, the Marshall Islands, Nauru, Niue, Palau, Papua New Guinea, Samoa, the Solomon Islands, Timor-Leste, Tonga, Tuvalu, and Vanuatu. The PICs are a mix of US territories, freely associated states, and fully sovereign nation-states. The PICs consist of three distinct subregions, each with its own history, culture, and interconnections with external partners. In this chapter, we use the terms “PICs” and “Oceania” as general references to the region. The former refers to the 18 countries listed previously. The term “Oceania” refers to the PICs, Australia, and New Zealand.

Despite their small sizes, the PICs have used key relationships with external partners to enhance their domestic policy goals.⁴ The PICs’ ability to function as savvy negotiators with external partners is consistent with larger, global trends of small states using China’s economic ascendance to attain benefits for their countries. For example, David Styan argues small states “have agency vis-à-vis China” and can use “locational advantages” to their benefit in negotiations with the People’s Republic of China.⁵ In terms of data and approach, we surveyed a wide variety of indicators before settling on the specific metrics discussed in this chapter. Our initial analysis included the collection of quantitative data on foreign aid, foreign direct investment, foreign debt levels, public diplomacy, military diplomacy, arms sales, and official state visits. We used PLA primary sources, media articles, and scholarly works to outline the theoretic framework, and then used this framework as the organizing principle for the empirical data. We also used quantitative data to test statistical models of aid, foreign direct investment, and diplomacy, the results of which are explained in our discussion of benchmarks; further details about the model are described in the final section, “A Note on the Data Used in This Chapter.”

Our contributions to the literature on the People’s Liberation Army and the PICs are threefold. First, to understand the activity of the People’s Liberation Army in Oceania, we must embed the activities within China’s larger maritime strategy. Second, though we focus on PLA strategic thinking, we link PLA debates on benchmarks and barriers with specific, empirical measures of these theoretical concepts. Third, we address political barriers to a more robust PLA presence from the perspective of PICs and the external actors that also want to maintain strategic access in this region. In essence, PRC imperatives do not always align with the geographic realities of the PICs nor the role of external actors within Oceania’s subregions. Strategic competition is a major issue in Oceania and one that is likely to shape the emerging landscape for decades to come.

This chapter proceeds as follows. In the next section, we describe China’s maritime strategy and PLA conceptions of the SIC. This theoretical discussion focuses on two main concepts: benchmarks

3. State Council of the People’s Republic of China (PRC), *Vision for Maritime Cooperation under the Belt and Road Initiative* (Beijing: State Council of the PRC, updated June 20, 2017).

4. Dame Meg Taylor, “The Future of the Pacific Islands Forum and the Framework for Pacific Regionalism,” in *The New Pacific Diplomacy*, ed. Greg Fry and Sandra Tarte (Acton, AU: ANU Press, 2015), 39–48.

5. David Styan, “China’s Maritime Silk Road and Small States: Lessons from the Case of Djibouti,” *Journal of Contemporary China* 29, no. 122 (2020): 191–206.

and barriers. The third section uses these two theoretical concepts to organize our data on the PLA presence in the region, addressing military diplomacy, the potential for PLA military bases in the Pacific, and current linkages between PRC aid, civilian diplomacy, and military activity. In our discussion of barriers, we explain PIC foreign policy choices, diplomatic recognition of Taiwan, and the presence of the United States and external actors in the region. In our conclusion, we summarize these findings to describe how economic imperatives are more consequential to PLA presence than a simple assessment of geostrategic importance might indicate.

Theoretical Foundations: PLA Conceptions of the SIC

The People's Liberation Army's discussions of Oceania reside within Xi Jinping's larger foreign policy efforts to build maritime power (海洋强国) as part of the BRI. First, we summarize China's maritime ambitions to understand how these strategic goals shape PLA thinking and activities. For the People's Republic of China to achieve its maritime goals, the country's leaders have regularly noted several components of this strategy, stating China "should enhance our capacity for exploiting marine resources, develop the marine economy, protect the marine ecological environment, resolutely safeguard China's maritime rights and interests, and build China into a maritime power."⁶ According to Xi, the People's Republic of China is constructing "a maritime community," and key to this endeavor is "China's initiative to build the 21st Century Maritime Silk Road [海上丝绸之路] [which] aims to promote maritime connectivity and cooperation."⁷ To promote this connectivity, Xi also notes the role of the military: "As the main maritime force of a country, the navy shoulders important responsibilities in maintaining maritime peace and order."⁸ Nonnaval actors, who have conducted data collection in the exclusive economic zones (EEZs) of PICs, also play a role. For example, scholars at the US-based China Maritime Studies Institute note, "On any given day, 5–10 Chinese 'scientific research vessels' [科学考查船] may be found operating beyond Chinese jurisdictional waters, in strategically-important areas of the Indo-Pacific."⁹ The PLA Navy, oceanographic survey ships, the China Coast Guard, and related actors, all of which are involved in distinct aspects of China's maritime activity, need to be taken into consideration when considering China's far-seas operations.¹⁰

These activities, including the preservation of marine resources, marine economic activity, and environmental protection, have unique implications for the health and vitality of the Pacific Islands. Oceania has more maritime space than physical land, which makes issues of fisheries,

6. Hu, Jintao, "Firmly March on the Path of Socialism with Chinese Characteristics and Strive to Complete the Building of a Moderately Prosperous Society in All Respects" (speech, 18th National Congress of the Chinese Communist Party, Beijing, China, November 8, 2012).

7. Xi, Jinping, "Build a Maritime Community of Shared Future," in *The Governance of China*, ed. State Council Information Office of the PRC, Central Policy Research Office of the Chinese Communist Party, and China International Publishing Group (Beijing: Foreign Languages Press, 2020), 3:539.

8. Xi, "Maritime Community of Shared Future," 538.

9. Ryan D. Martinson and Peter A. Dutton, *China's Distant-Ocean Survey Activities: Implications for US National Security*, China Maritime Report no. 3 (Newport, RI: China Maritime Studies Institute, November 2018), 1–2.

10. Ian Burns McCaslin and Andrew S. Erickson, "The Impact of Xi-Era Reforms on the Chinese Navy," in *Chairman Xi Remakes the PLA: Assessing Chinese Military Reforms*, ed. Phillip C. Saunders et al. (Washington, DC: National Defense University Press, 2019), 125–70.

marine protection, and climate change particularly salient.¹¹ In contrast, China’s “maritime rights and interests” tend to focus on sovereignty claims within the first island chain. Yet, the way in which China interprets the UN Convention on the Law of the Sea—and, specifically, how EEZs are managed—could have an impact on how EEZs are protected in the Pacific. To dissect these issues further, we turn to PLA conceptualizations of island chains.

Benchmarks and Barriers as Operational Access Concepts

Island chains in the Pacific are a facet of the physical geography and are also salient because of the role geography played in World War II. The strategic importance of these island chains remained during the Cold War because of US and allied concerns about Soviet and Chinese aggression within the first island chain.¹² For the People’s Liberation Army, the navy’s “operational sea areas” have mainly been “the First Island Chain and the outlying sea areas along this island chain, as well as Yellow Sea, East China Sea, and South China Sea.”¹³ For the SIC, PLA writings generally note several key locations; according to a map in the *Handbook of PLA Navy Personnel*, the SIC begins on “Japan’s Honshū Island, crosses the Northern Marianas Islands, Guam, Palau, Maluku, and Papua, and ends at the northern tip of Australia.”¹⁴ The SIC is also conceptualized in military planning for medium- and long-range precision-strike systems.¹⁵ The Academy of Military Science notes the SIC may require “long-range monitoring” as a “flexible reaction area.”¹⁶ Thus, the SIC represents a set of locations the People’s Liberation Army may have to operate in as well as locations that present unique challenges for access due to the US presence.

For China, the conceptualization of the SIC, at least as espoused by the People’s Liberation Army, does not align perfectly with the Belt and Road Initiative’s blue economic passage. The Xinhua News Agency and official sources reference a “China–Oceania–South Pacific blue economic passage,” but these descriptions only state it extends “into the Pacific Ocean.”¹⁷ Maps of this Belt and Road Initiative passage terminate in either Indonesia or Papua New Guinea, but countries such as Fiji, Samoa, and the Solomon Islands have all signed on to the initiative. According to China’s Green Finance & Development Center, as of January 2021, 140 countries total and 25 countries in East Asia and the Pacific have signed onto the initiative.¹⁸ The tension between this corridor and conceptions of island chains is problematic because different conceptualizations of the SIC have

11. Fry and Tarte, *New Pacific Diplomacy*.

12. Bernard D. Cole, *The Great Wall at Sea: China’s Navy Enters the Twenty-First Century* (Annapolis, MD: Naval Institute Press, 2001), 164–65.

13. Academy of Military Science Military Strategy Studies Department, *Science of Military Strategy*, 2013 ed., trans. China Aerospace Studies Institute and Project Everest (Montgomery, AL: China Aerospace Studies Institute, 2021).

14. Andrew Erickson and Joel Wuthnow, “Barriers, Springboards, and Benchmarks: China Conceptualizes the Pacific ‘Island Chains,’” *China Quarterly* 225 (March 2016): 1–22.

15. Academy of Military Science, *Science of Military Strategy*, 281.

16. Academy of Military Science, *Science of Military Strategy*, 284.

17. Xinhua, “China Proposes ‘Blue Economic Passages’ for Maritime,” *China Daily* (website), updated June 21, 2017, https://www.chinadaily.com.cn/business/2017-06/21/content_29825517.htm.

18. Sebastian Ibold, “Belt and Road Initiative,” Belt and Road Initiative (website), accessed February 25, 2021, <https://www.beltroad-initiative.com/belt-and-road/>; and Christoph Nedopil, “Countries of the Belt and Road Initiative (BRI),” Green Finance and Development Center (website), accessed February 25, 2021, <https://green-bri.org/countries-of-the-belt-and-road-initiative-bri/>.

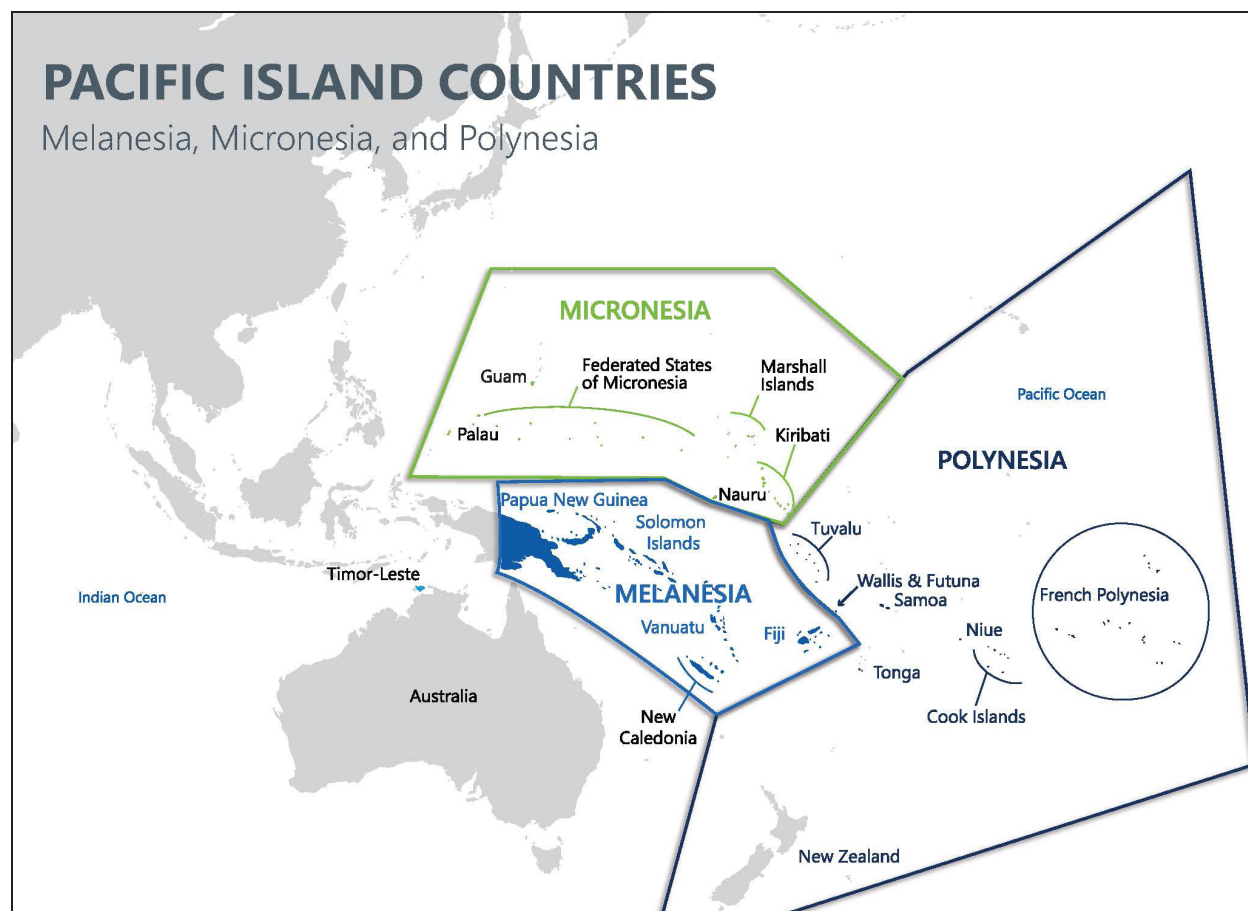


Figure 6-1. Map of Oceania's subregions

their own strategic logic. Though the People's Liberation Army may want to establish benchmarks, neither Chinese nor US views of the SIC fully capture the ethnogeographic subregions. As figure 6-1 shows, the three main subregions are Melanesia, Micronesia, and Polynesia, and notional conceptions of the SIC bisect these areas.

The People's Liberation Army's discussions of the SIC revolve around several operational access issues; we focus on benchmarks and barriers because they reflect the most important aspects of current PLA thinking.¹⁹ Benchmarks are viewed "as milestones for China's own force projection to demarcate China's progress in projecting power further from its shores."²⁰ Benchmarks are most directly related to PLA views of far-seas operations; as such, benchmarks serve as a method for assessing the PLA's progress in expanding its maritime presence. Benchmarks also represent the increasing reach of PLA air and missile forces. For example, in the *Science of Military Strategy* (2013), the People's Liberation Army specifically notes the need for medium- and long-range air precision-strike systems, expressly noting the "effective

19. Erickson and Wuthnow, "Barriers, Springboards, and Benchmarks," 7.

20. Erickson and Wuthnow, "Barriers, Springboards, and Benchmarks," 14.

operational radius should reach 3000 km beyond the borders, so that platform radius or platform radius plus firepower radius reaches the Second Island Chain.”²¹

We focus on three categories of benchmarks to evaluate PLA activity in the PICs. First, we examine PLAN deployments in the region and the activities of survey vessels that could provide information to the People’s Liberation Army. In this first benchmark, we include PLAN port calls as one measure of interest because these locations may be considered areas of interest for future access. Second, we address debates about overseas basing. As of this writing, the People’s Liberation Army does not have any permanent military installations in Oceania, but the army could pursue logistics support facilities similar to those it has created in Djibouti in the Indian Ocean. According to Xi Jinping, “[A]s we roll out the blueprint for the Belt and Road Initiative, we strive to forge a route for cooperation across the Pacific.” Xi also notes the route should connect China’s Maritime Silk Road to Latin America.²² Third, we review PLA interactions with militaries in the region, including diplomatic exchanges, visits, and training events. We argue the connection between PLA activities in the PICs is primarily a facet of overall foreign policy imperatives, rather than being driven solely by military strategy. But the limited number, size, and capacity of military partners in the region heavily shape the military-specific activities. Only three PICs currently have standing militaries: Fiji, Papua New Guinea, and Tonga. As a note, Vanuatu has a paramilitary force known as the Vanuatu Mobile Force. China has sold equipment to the force, according to the Vanuatuan government.²³

Barriers are the other main concept relevant to PLA views of the SIC. Barriers represent “foreign fortifications designed to ‘contain’ Chinese force projection.”²⁴ Under Admiral Liu Huaqing’s maritime strategy of the 1980s, the SIC was a barrier that would need to be dealt with later because “China’s ability to control this area would require very significant resources for its Navy and Air Force.”²⁵ The exact timelines for dealing with these barriers were not clearly delineated in the 1980s and 1990s because PLA capabilities needed to progress to a level that made addressing them feasible. More recently, PLA thinking has evolved because the PLA Navy regularly operates farther from China’s immediate periphery. One scholar from Sun Yat-sen University’s National Center for Oceanian Studies describes the challenge for China as one of “undermining the US-led defensive network in the second island chain” and asserts China’s “maritime great power dream will not [come] true if the second island chain remain[s] intact.”²⁶

A key element of the PLA’s conceptualization of the SIC as a barrier is the US presence in Guam. A scholar at the China Institute of International Studies described the situation, noting, “The United

21. Academy of Military Science, *Science of Military Strategy*, 281.

22. Xi, Jinping, “Open a Path to Cooperation across the Pacific,” in *The Governance of China*, 3:555.

23. Ministry of National Defense, “Vanuatu, China Vow to Strengthen Military Ties,” China Military Online (website), January 20, 2014, http://eng.mod.gov.cn/DefenseNews/2014-01/20/content_4486071.htm (page discontinued); and “China Equipped Vanuatu Mobile Force,” Vanuatu Prime Minister’s Office (website), March 28, 2017, <https://pmo.gov.vu/index.php/en/public-information/116-china-equipped-vanuatu-mobile-force>.

24. Erickson and Wuthnow, “Barriers, Springboards, and Benchmarks,” 11.

25. Cole, *Great Wall at Sea*, 166.

26. Yu, Chang Sen, “The Pacific Islands in Chinese Geo-Strategic Thinking” (working paper, China and the Pacific: The View from Oceania Conference, National University of Samoa, Apia, WS, February 25–27, 2015), 10, <https://www.wgtn.ac.nz/chinaresearchcentre/programmes-and-projects/china-symposiums/china-and-the-pacific-the-view-from-oceania/10-Yu-Changsen-The-Pacific-Islands-in-Chinese-Geo-strategic-Thinking.pdf>.

States has also reinforced the military power of the second island chain, which centers on Australia and Guam, by dispatching 2,500 people troops and equipping C-band radars and space telescopes in Australia, while upgrading and expanding the Guam military base with the plan to transfer nearly 10,000 US troops from Okinawa to Guam.”²⁷ Thus, Guam and northern Australia represent key focal points that could constrain future PLA operations in Oceania. Another article, published in May 2020 on China Military Online, noted the strategic assets located in Guam, highlighting the US B-52H strategic bomber and its strategic deterrence operations in the Asia-Pacific region. The original Chinese reads, “B-52H 战略轰炸机是遂行美军印太司令部 . . . 的主力机型 . . . 在亚太地区发展战略威慑行动.”²⁸

Guam is perceived as a potential barrier because the island is viewed as a “strategic fulcrum” (重要支点) or “bridgehead” (桥头堡) for the US military. In commentary posted on China Military Online, Lin Yuan [林渊] uses the term “重要支点,” which we translate as “strategic fulcrum” or “major strongpoint.” Li Jie [李杰], an oceanographic expert in the PRC government, uses the term “桥头堡” (bridgehead) to refer to Guam. Both terms denote Guam is a center of gravity for the US presence in the SIC.²⁹ Guam is a central focal point, but other locations in the North Pacific also play a role. The North Pacific is roughly synonymous with the Micronesian subregion, but some countries, such as Nauru, are so close to the Equator, they could fall into either the North or South Pacific. For our purposes, we use the terms Micronesia and North Pacific interchangeably to refer to the subregion that includes the Commonwealth of the Northern Mariana Islands, Guam, the Federated States of Micronesia, Kiribati, the Marshall Islands, Nauru, and Palau.

For example, Li Jie notes the importance of Saipan and Tinian in the Northern Marianas Islands, describing them as bridgeheads that could be used as a stronghold for attack.³⁰ The focus on specific geographic locations and their importance to US military power is consistent with PLA discussions of “springboards” (跳板), which are island chains that could be used “as facilitators of foreign force projection against China.”³¹ The use of locations in the North Pacific by the US military is enhanced by the special relationship with the Freely Associated States of the Federated States of Micronesia, the Marshall Islands, and Palau. These locations are not discussed extensively in PLA writings, but Li Jie notes the wider US presence in these maritime channels could be steps to encircle and control (围堵与扼控) China’s freedom of maneuver in the SIC. (The original reads, “第二岛链上的各‘关隘要道’ 实施一步的围堵与扼控.” To assess the extent of PLA discussions, we conducted searches on China Military Online, in both Chinese and English, for all PICs. More information on the extent of coverage for each individual PIC is available upon request.)

27. Liu, Feitao, “The Strengthening of US Competition with China and the Future Trend of US-China Relations,” *China International Studies* 2016, no. 1 (January/February 2016).

28. Lin, Yuan, 林渊, “美军关岛上演‘大象漫步’暗藏玄机” [US military in Guam performs “Elephant Walk” hidden secret], China Military Online (website), May 9, 2020, http://kj.81.cn/content/2020-05/09/content_9810062.htm (page discontinued).

29. *China National Defense Daily*, “Hidden Mystery of the ‘Elephant Walk’ in Guam,” Xinhuanet (website), April 20, 2020, http://www.xinhuanet.com/mil/2020-04/20/c_1210578768.htm; and Li, Jie, 李杰, “李杰: 美加快构建第二岛链‘桥头堡’” [Li Jie: US accelerates the construction of second island chain “bridgehead”], 环球时报 [*Global Times*], September 30, 2013.

30. Li, Jie, “US Accelerates.”

31. Erickson and Wuthnow, “Barriers, Springboards, and Benchmarks,” 13.

Another concern about encirclement is the role of Australia. An article on China Military Online specifically noted the presence of the US Marine Corps in Darwin, Australia.³² The crux of the discussion was whether the COVID-19 pandemic was hurting US military readiness in the region, but the mention of Australia is noteworthy for at least two reasons. First, Sino-Australian relations have deteriorated significantly in the past several years. Second, Australian officials are concerned about China's military activities in the South Pacific, as illustrated in the *2020 Defence Strategic Update*, which states, "China's active pursuit of greater influence in the Indo-Pacific" has prompted the Australian government to "focus on Australia's immediate region: ranging from the north-eastern Indian Ocean . . . to Papua New Guinea and the South West Pacific."³³ But Chinese writings also express concerns about the People's Liberation Army emulating a US-like basing system for their own use, highlighting overseas basing can be expensive and logistically challenging.³⁴ The PLA's recognition of the costs associated with these types of military facilities, which it may view as a self-imposed barrier to its own operational access, could constrain China's desire to use military bases as a benchmark of presence in the SIC.

Benchmarks and Barriers: Realities of the PLA's Pacific Presence

Patterns of PLA activity in the SIC do not perfectly reflect theoretical discussions. We argue this reflection is not perfect because operational access is not the only driver of PLA behavior. Instead, PLA activities, such as military diplomacy and port calls, follow China's larger economic or diplomatic interests. Even if the SIC may be an important framework within PLA writing, activity on the ground represents geographic, economic, and local realities. First, the largest economies in the PICs are located in Melanesia; thus, to support China's maritime foreign policy goals, the People's Liberation Army engages in that subregion. Second, the only countries with standing militaries are also located in Melanesia; thus, PLA interactions are concentrated in those countries.³⁵ In Micronesia, the Compact of Free Association (COFA) ensures any foreign military presence in the Freely Associated States is governed by the United States. Diplomatic realities such as recognition of Taiwan also represent barriers to PLA engagement. We first discuss three categories of benchmarks before turning to three types of barriers that limit China's ability to establish a presence in Oceania.

Benchmark 1: PLA Military Diplomacy and Related Naval Activity

Of the PICs that have military forces, nearly all defense spending is concentrated in Fiji and Papua New Guinea. Fiji spent approximately \$83.5 million on defense, and Papua New Guinea

32. Lin, Yuan, "US Military in Guam."

33. Department of Defence, *2020 Defence Strategic Update* (Canberra, AU: Department of Defence, July 1, 2020), 6, 11, 21.

34. Wang Tianze 王天泽 and Qi Wenzan 齐文暂, "海外军事基地运输投送保障探讨" [An exploration into the support of transportation and projection for military bases abroad], *研究与设计 [Research and Design]* 16, no. 1 (January 2018).

35. Denghua Zhang, "China's Military Engagement with Pacific Island Countries: New Frontiers Bring Heightened Competition," Policy Forum (website), August 17, 2020, <https://www.policyforum.net/chinas-military-engagement-with-pacific-island-countries/>.

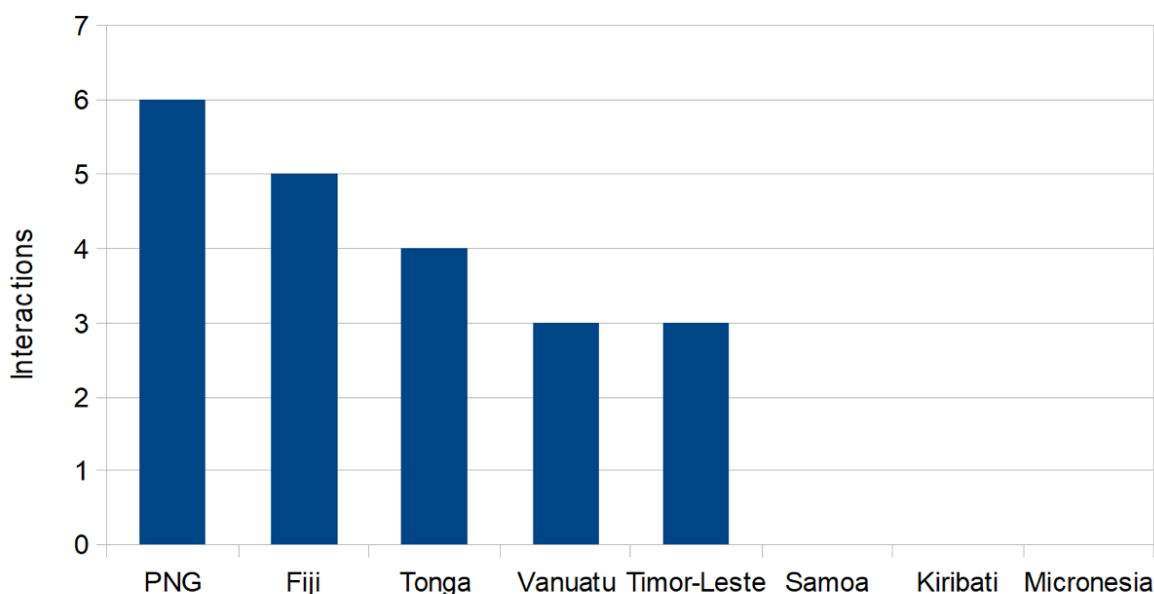


Figure 6-2. Number of PLA interactions with PICs, 2003–16

spent about \$80.8 million. (All figures are in constant US dollars for 2019.)³⁶ Only five PICs had any military diplomatic interactions with China between 2003 and 2016, and interactions were quite limited. The leading country, Papua New Guinea, only had six interactions with the People's Liberation Army during that period (see figure 6-2). Our analysis of military diplomatic interactions covers the period from 2003–16. The majority of interactions were visits, hosted either in China or in the country of interest.³⁷

The PICs represent a benchmark for PLAN deployments, and the number of visits to the Pacific has incrementally increased over time. According to the official history of the PLA Navy, the first “long-distance oceanographic surveying” in the southern Pacific occurred in 1976.³⁸ The PLA Navy's first global circumnavigation, which occurred in 2002, included two ships that visited French Polynesia.³⁹ The PLA Navy's deployments to the PICs have continued since the early 2000s, but these deployments have not been high in number, with approximately 17 separate PLAN port calls to various PICs from 2017–20. Three items are of note. First, medical diplomacy remains an important component of PLAN deployments. The hospital ship

36. “SIPRI Military Expenditure Database,” Stockholm International Policy Research Institute (SIPRI) (website), n.d., <https://www.sipri.org/databases/milex>.

37. Kenneth Allen, Phillip Saunders, and John Chen, *Chinese Military Diplomacy, 2003–2016: Trends and Implications*, China Strategic Perspectives no. 11 (Washington, DC: Institute for National Strategic Studies, National Defense University Press, 2017), 65.

38. Christopher D. Yung et al., *China's Out of Area Naval Operations: Case Studies, Trajectories, Obstacles, and Potential Solutions*, China Strategic Perspectives no. 3 (Washington, DC: Institute for National Strategic Studies, National Defense University Press, 2010).

39. Yung et al., *Out of Area Naval Operations*, 15.

Peace Ark (和平方舟) had major deployments in 2014 and 2019. Local PIC media noted the hospital ship “provided free medical treatment,” and the *Peace Ark* has paid multiple visits to the area.⁴⁰

Second, PLAN training ships made regular visits to Fiji as part of the overall strengthening of relations between the People’s Liberation Army and the Republic of Fiji Military Forces. Fiji has become a regular port call and resupply stop for PLAN and other PRC vessels operating in Oceania. During Harmonious Mission 2014, Fiji was the second stop on the four-country voyage and was greeted upon arrival by the chief of staff of the Fiji military, Brigadier-General Mohammed Aziz.⁴¹ The *Peace Ark* visited Fiji again in 2019 while in transit between China and South America.⁴² Training ships of the PLA Navy have also made port calls to Fiji. In 2016, the *Zheng He* (郑和) visited Fiji after a goodwill visit to Australia.⁴³ In 2019, the PLAN training ship *Qi Jiguang* (戚继光) visited Fiji’s capital, Suva, and was hosted by the deputy commander of Fiji’s military.⁴⁴ The PLA Navy provided a hydrographic research vessel to the Fijian Navy.

In addition, the PLA Navy is providing training to the Fijian Navy on operating the ship to increase Fiji’s capacity to conduct maritime research.⁴⁵ In 2020, China donated vehicles to the Republic of Fiji Military Forces, stating they could be used for disaster relief from typhoons and for COVID-19 response.⁴⁶ Third, oceanographic research vessels have steadily become more active in the Pacific. (According to the Asia Maritime Transparency Initiative, China had 25 research ships that operated in the Indo-Pacific [outside of China’s national jurisdiction] between April 2019 and March 2020.)⁴⁷ The Ministry of Natural Resources vessel *Xiang Yang Hong 01* (向阳红 01) was operating in Palau’s EEZ, and Australian defense officials have expressed concerns about the locations of the ship’s other surveys.⁴⁸

Benchmark 2: Potential for Expanded PLA Presence

The second benchmark is the potential for a permanent PLA presence in the PICs in the form of a military base or logistics support facility. (Beijing typically refers to its military facility

40. Glenda Willie, “Ark Peace on Second Visit to Vanuatu,” *Vanuatu Daily Post* (website), July 21, 2018, https://dailypost.vu/news/ark-peace-on-second-visit-to-vanuatu/article_48d6b26a-6f3b-5a34-a737-0c16c0915d45.html.

41. Xinhua, “China’s Peace Ark Starts Medical Assistance Mission in Fiji,” *People’s Daily Online* (website), August 22, 2014, <http://en.people.cn/n/2014/0822/c90883-8773470.html>.

42. “历时205天 海军和平方舟医院船完成任务回国” [Historic 205-day navy Peace Ark hospital ship completes trip and returns home], *Xinhuanet* (website), January 18, 2019, http://www.xinhuanet.com/politics/2019-01/18/c_1124011445.htm.

43. Maika Bolatiki, “Chinese Training Ship Zheng He to Stop in Fiji,” *Fiji Sun* (website), December 7, 2016, <https://fjिसun.com.fj/2016/12/07/chinese-training-ship-zheng-he-to-stop-in-fiji/>.

44. *People’s Liberation Army Daily*, “戚继光舰抵达斐济进行友好访问” [Qi Jiguang arrives in Fiji for a friendship visit], Ministry of National Defense of the PRC (website), November 5, 2019, http://www.mod.gov.cn/diplomacy/2019-11/05/content_4854475.htm.

45. “中国新型双体舰艇将交付斐济海军 采用喷水推进” [China delivers new catamaran with water-jet propulsion to Fiji navy], *环球时报* [*Global Times*], October 8, 2018, <http://mil.news.sina.com.cn/china/2018-10-08/doc-ihkvrhpt0569012.shtml>.

46. Ministry of Communications, “China Donates Vehicles to the RFMF for Improved Humanitarian Assistance and Disaster Relief,” Fijian Government (website), April 9, 2020, <https://www.fiji.gov.fj/Media-Centre/News/CHINA-DONATES-VEHICLES-TO-THE-RFMF-FOR-IMPROVED-HU>.

47. Martinson and Dutton, *Distant-Ocean Survey Activities*; and “A Survey of Marine Research Vessels in the Indo-Pacific,” Asia Maritime Transparency Initiative (website), April 16, 2020, <https://amti.csis.org/a-survey-of-marine-research-vessels-in-the-indo-pacific/>.

48. Andrew Greene, “Chinese Research Vessel *Xiang Yang Hong 01* Tracked in Waters near Christmas Island Off Western Australia,” *ABC News Australia* (website), updated March 1, 2020, <https://www.abc.net.au/news/2020-03-02/chinese-research-vessel-tracked-defence-subs-western-australia/12009708>.

in Djibouti as a “logistics support facility.”⁴⁹ To date, no PRC military facilities have been established in the PICs, and PRC Ministry of Foreign Affairs officials have referred to speculation of a PLA desire for a base as “fake news.”⁵⁰ According to the US Department of Defense’s *Military and Security Developments Involving the People’s Republic of China 2020*, “The PRC has likely considered locations for PLA military logistics facilities” in at least 13 countries, including Angola, Cambodia, Indonesia, Kenya, Myanmar, Pakistan, Thailand, Seychelles, Singapore, Sri Lanka, Tanzania, Tajikistan, and the United Arab Emirates.⁵¹ None of the countries mentioned are located in Oceania, and the majority of locations are either in the Indian Ocean basin or Southeast Asia.⁵² Thus far, speculation about possible bases has focused on three locations—Fiji, Kiribati, and Vanuatu—so we briefly discuss each case below.

Case 1: Fiji, Peacekeeping, and Black Rock

In 2018, Australia-based media claimed, “Australia successfully blocked China from funding a major regional military base in Fiji.”⁵³ According to *The Australian*, “The Australian and Fijian governments have said the base would be a ‘regional hub for police and peacekeeping training and pre-deployment preparation.’”⁵⁴ The Chinese embassy in Fiji responded to speculation of Chinese negotiations for the Black Rock facility as “irresponsible, inconducive to regional peace and stability, and China-Australian relations.”⁵⁵ Although China denies any negotiations over Black Rock, China and Fiji substantively agree on several key security issues.

First, China and Fiji are both committed to participation in UN peacekeeping, and peacekeeping has been a long-standing component of Fiji’s foreign policy.⁵⁶ As of 2020, “the PRC continued to contribute the largest number of forces among the permanent members of the United Nations (UN) Security Council.”⁵⁷ Second, in 2018, Fiji was seeking external funds to renovate Black Rock Camp in Nadi, which is a regional hub for police and peacekeeping training.⁵⁸ Thus, Chinese cooperation on peacekeeping would have been a natural extension of the growing military ties

49. Jean-Pierre Cabestan, “China’s Military Base in Djibouti: A Microcosm of China’s Growing Competition with the United States and New Bipolarity,” *Journal of Contemporary China* 29, no. 125 (2020): 731–47.

50. “Foreign Ministry Spokesperson’s Remarks on the Reports of China Seeking Military Base in Vanuatu,” Embassy of the PRC in Australia (website), April 10, 2018, <https://www.mfa.gov.cn/ce/ceau/eng/sgjs/sghd/t1549540.htm>.

51. Office of the Secretary of Defense (OSD), *Military and Security Developments Involving the People’s Republic of China 2020* (Washington, DC: OSD, 2020), 128.

52. OSD, *Military and Security Developments*.

53. Primrose Riordan, “Australia Beats China to Funding Fiji Base,” *Australian* (website), September 7, 2018, <https://www.theaustralian.com.au/nation/defence/australia-beats-china-to-funding-fiji-base/news-story/60d05ca8eb2bec629080c2c844255bbd>.

54. Riordan, “Australia Beats China.”

55. “Chinese Embassy Spokesperson Criticizes Australian Media Reports regarding the Black Rock Camp Project,” Embassy of the PRC in the Republic of Fiji (website), September 24, 2018, <http://fj.china-embassy.org/eng/gdxw/t1598135.htm>.

56. “Troop and Police Contributors,” UN Peacekeeping (website), accessed on March 14, 2021, <https://peacekeeping.un.org/en/troop-and-police-contributors>; and Makereta Komai, “Fiji’s Foreign Policy and the New Pacific Diplomacy,” in *The New Pacific Diplomacy*, 115.

57. OSD, *Military and Security Developments*, 129.

58. Amy Seawright, Brian Harding, and Kim Mai Tran, *Strengthening the US-Pacific Islands Partnership* (Washington, DC: Center for Strategic and International Studies, 2019), 19; and Christopher Mudaliar, “Australia Outbids China to Fund Fiji Military Base,” *Interpreter* (blog), October 4, 2018, <https://www.lowyinstitute.org/the-interpreter/australia-outbids-china-fund-fiji-military-base>.

between China and Fiji that resulted from Fiji's "Look North" policy.⁵⁹ After a military coup in 2006, which prompted Australia to impose sanctions on Fiji, Fijian government leaders sought to avoid diplomatic isolation.⁶⁰ According to Ratu Inoke Kubuabola, Fiji's former minister of foreign affairs, the country was "jolted from our complacency by the doors that were slammed in our faces, we looked north—to the great powers of Asia, especially China, India and Indonesia and more recently to Russia."⁶¹ Because of China's publicly stated noninterference policy, the country did not view the military coup nor Fiji's suspension from the Pacific Islands Forum as a problem for the relationship between the two nations.⁶²

Case 2: Kiribati and Satellite Tracking

From 1996 to 2003, China maintained a satellite-tracking station on the Tarawa atoll in Kiribati. The original negotiations called for a 15-year lease. But when Kiribati switched its recognition to Taiwan in November 2003, the facility was closed.⁶³ In September 2019, Kiribati switched diplomatic recognition back to the People's Republic of China, as did the Solomon Islands.⁶⁴ In Kiribati, the switch was controversial. Local protestors were reported to have responded by "waving Taiwanese flags and chanting, 'We love Taiwan, we hate China, we want peace.'"⁶⁵ But, despite political controversies, the diplomatic switch has opened the door for negotiations between China and Kiribati to reestablish the facility. When a Chinese diplomat responded to a question about the facility, the official simply said, "Beijing was 'open' to all sorts of projects in Kiribati."⁶⁶ The Space Systems Department of the People's Liberation Army's Strategic Support Force "plays a major role in the launch, tracking, command, and long-term operations" of ground-based facilities; thus, any reopening of the satellite station in Tarawa would result in at least some PLA or PRC government personnel on the ground to manage the facility's operations. The China National Space Administration, the PRC government's civilian space agency, would also likely have a presence and was previously involved with the management of the facility on Tarawa.⁶⁷

Case 3: Vanuatu and the Luganville Wharf in Port Vila

In the mid-2010s, Shanghai Construction Group Corporation renovated the Luganville Wharf in Port Vila, Vanuatu. (According to AidData, the agreement was struck in

59. Litia Mawi, "Fiji's Emerging Brand of Pacific Diplomacy: A Fiji Government Perspective," in *The New Pacific Diplomacy*; and Komai, "Fiji's Foreign Policy."

60. Mawi, "Fiji's Emerging Brand"; and Komai, "Fiji's Foreign Policy."

61. Komai, "Fiji's Foreign Policy," 113.

62. Komai, "Fiji's Foreign Policy," 111–21.

63. Peter Wood, Alex Stone, and Taylor A. Lee, *China's Ground Segment: Building the Pillars of a Great Space Power* (Montgomery, AL: China Aerospace Studies Institute, March 2021); and Sue Windybank, "Why China First Wooded Then Jilted Kiribati," Centre for Independent Studies (website), January 29, 2007, <https://www.cis.org.au/commentary/articles/why-china-first-wooded-then-jilted-kiribati/>.

64. April A. Herlevi, "Many Contenders Eye the Pacific Island Countries," *CNA InDepth* (blog), October 29, 2019, <https://www.cna.org/news/InDepth/article?ID=20>.

65. Christopher Pala, "China Could Be in Reach of Hawaii after Kiribati Elects Pro-Beijing President," *Foreign Policy* (website), June 19, 2020, <https://foreignpolicy.com/2020/06/19/kiribati-election-china-taiwan/>.

66. Reuters Staff, "China Eyes Increased Ties with Kiribati, Site of Space Tracking Station," Reuters (website), January 6, 2020, <https://www.reuters.com/article/us-china-kiribati-idUSKBN1Z5168>.

67. Wood, Stone, and Lee, *China's Ground Segment*, 4, 50.

November 2014, and “China provided a concessional loan of US\$87 million for the project.”⁶⁸ Soon thereafter, Australian media discussed the possibility the port would eventually become a PLA military facility. The *Sydney Morning Herald* stated, “Beijing is looking to establish a permanent military presence on Vanuatu.”⁶⁹ But the Luganville Wharf was officially turned over to the Vanuatu government in 2017.⁷⁰ Since then, some Chinese construction projects in Vanuatu have generated local controversies over a lack of transparency, but none have resulted in any permanent PLA facilities.⁷¹

Benchmark 3: Linkages between the Belt and Road Initiative and Defense Diplomacy

The People's Liberation Army does not conduct its activities in isolation; rather, PRC foreign policy imperatives affect China's military ties. To measure this connection, we conducted quantitative analysis of the effect PRC aid and civilian diplomacy had on the total count of military diplomatic interactions between China and PICs from 2003–16. (The quantitative data for this part of our analysis only extended through 2016 because it was the final year of data for both AidData and the National Defense University military diplomacy data set.) We considered the impact of PRC aid because in the one location where China has sought overseas basing access so far (Djibouti), Beijing lavished billions of dollars in aid over a multiyear period.⁷² The main quantitative analysis includes the average annual amount of PRC aid received by the eight PICs included in the statistical analysis (see figure 6-3, and see “A Note on the Data Used in This Chapter” for the full model description).⁷³

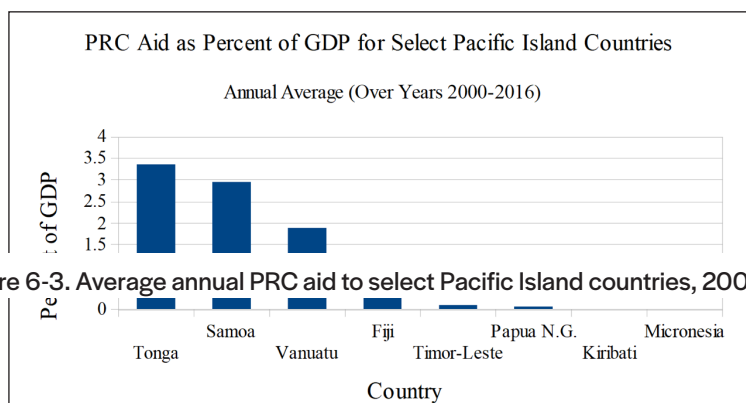


Figure 6-3. Average annual PRC aid to select Pacific Island countries, 2000–16

68. Axel Dreher et al., “Aid, China, and Growth: Evidence from a New Global Development Finance Dataset” (AidData Working Paper no. 46, AidData, Williamsburg, VA, 2017).

69. David Wroe, “The Great Wharf from China, Raising Eyebrows across the Pacific,” *Sydney Morning Herald* (website), April 11, 2018, <https://www.smh.com.au/politics/federal/the-great-wharf-from-china-raising-eyebrows-across-the-pacific-20180411-p4z8yu.html>.

70. “China-Funded Luganville Main Wharf Handed Over to Vanuatu Government,” *Vila Times* (website), August 21, 2017, <https://www.vilatimes.com/2017/08/21/iririki-resort-to-host-first-vanuatu-travel-expo/>.

71. Jamie Smyth, “China Aid Wins Influence in Pacific Despite Rising Concerns,” *Financial Times* (website), November 14, 2019, <https://www.ft.com/content/bf2cfd72-f6c1-11e9-9ef3-eca8fc8f2d65>.

72. Erica S. Downs, Jeffrey Becker, and Patrick deGategno, *China's Military Support Facility in Djibouti: The Economic and Security Dimensions of China's First Overseas Base* (Arlington, VA: CNA, July 2017), 35; and Jeffrey Becker et al., *China's Presence in the Middle East and Western Indian Ocean: Beyond Belt and Road* (Arlington, VA: CNA, February 2019), 106–7.

73. Samantha Custer et al., *Ties That Bind: Quantifying China's Public Diplomacy and Its “Good Neighbor” Effect* (Williamsburg, VA: AidData, June 2018).

We calculated aid as a percentage of gross domestic product (GDP) using AidData's "total financial public diplomacy" measure, which includes humanitarian aid, budgetary support, debt relief, and infrastructure investment. Infrastructure investment covers both official development assistance and other official financing. The GDP data is from the World Bank, and we used 2014 as the index year for consistency with the AidData measures, which also index from 2014 US dollars.

A simple comparison of the number of PLA military interactions shows the countries receiving high amounts of PRC aid as a percentage of GDP are not the same as the PICs with the most military engagement with China. For example, two Melanesian countries—Papua New Guinea and Fiji—are in first and second place for the number of PLA interactions, but they are fourth and sixth, respectively, among PIC recipients of PRC aid. Instead, two Polynesian countries—Tonga and Samoa—are first and second in terms of PRC aid as a percentage of their GDPs. Tonga ranks third in terms of interactions with the People's Liberation Army, and Samoa had no PLA military interactions from 2003 to 2016.

This pattern suggests PRC economic and military interests in the PICs may diverge, with certain countries being priorities for aid and others for military diplomacy. To explore these patterns further, we statistically modeled PRC defense diplomacy with the PICs and East and Southeast Asia as a function of several factors: aid with diplomatic intent, GDP, civilian diplomatic interactions, diplomatic recognition (the People's Republic of China versus Taiwan), and location in Asia (Oceania versus Southeast Asia). We include other East and Southeast Asian countries in the model because the number of PICs for which we have data [eight] is too low for statistical analysis. See "A Note on the Data Used in This Chapter" for further details. This analysis generated several findings that highlight how the relationship between PRC defense diplomacy, civilian diplomacy, and economic aid may differ in the PICs when compared to PRC activities in other parts of Asia.

First, defense diplomacy in the PICs is strongly associated with PRC civilian diplomatic efforts. Simply put, China is unlikely to engage in military diplomacy with countries with which it does not already enjoy strong civilian diplomatic relations. Second, the amount of PRC aid with diplomatic intent a country receives is inversely associated with PLA diplomacy in that country, meaning the countries where PRC aid forms the largest share of the GDP are not the same as those that interact most frequently with the People's Liberation Army. This pattern suggests China's cultivation of defense relations in the PICs, at least as measured by level of military diplomacy, is not as simple as more PRC aid leading to increased military access. The PRC's investments in the PICs, at least thus far, do not compare in scale to China's investments in Djibouti or other parts of the Indian Ocean region (IOR).⁷⁴ This observation suggests, unlike in the Indian Ocean, China may not view distributing economic aid to the PICs as a means of gaining military access. Reasons abound why the pattern of PRC engagement with the PICs—economic, diplomatic, and military—might differ from elsewhere. The next section considers three such barriers to PRC access: PIC agency, recognition of Taiwan, and the presence of the United States and other traditional partners.

74. Downs, Becker, and deGategno, *China's Military Support Facility*, 9; and Becker et al., *China's Presence in Middle East*, 106–7.

Barrier 1: The Agency of Pacific Island Countries

The activities of PRC and PLA diplomats are most pronounced in Melanesia, even if PLA efforts to establish a logistics or military facility in the region have been unsuccessful. According to the Lowy Institute's Pacific Aid Map, the top five recipients of aid from China between 2010 and 2020 were Papua New Guinea, Fiji, Samoa, Vanuatu, and Tonga; of all PIC recipients, nearly 70 percent of Chinese aid went to countries in Melanesia.⁷⁵ Several factors, however, limit China's ability to play a more robust role in the region: the agency of the PICs themselves, recognition of Taiwan, and the role of external actors. Although China and the United States may view the security environment through the lens of the first island chain and the SIC, leaders in Oceania are shaped by the domestic politics in their respective countries and the "cultural and racial differences in the diverse Pacific."⁷⁶ Like other small states globally, the PICs employ strategies to ensure their economic, political, and diplomatic interests are served by their relationships with countries outside the region.

Small states face unique challenges, and great-power competition in the Indo-Pacific has exacerbated both the challenges and opportunities of PICs.⁷⁷ In terms of opportunities, PICs have taken advantage of the financial resources China has offered through the Belt and Road Initiative. Small states globally have been able to "wield a surprising degree of agency" in their negotiations with Beijing.⁷⁸ Styan focuses on Djibouti and small states in Africa, but, based on our analysis of quantitative trends and individual cases, we see similar patterns among states in the Pacific.⁷⁹ For PICs, wielding agency has involved taking advantage of China's aid policies, with over \$1.76 billion in aid having gone to the region since 2010. This figure was derived from the Lowy Institute's Pacific Aid Map main explorer page, filtering for China and selecting "aid spent" rather than "aid committed," which represents funds that have already been used on projects. The figure is based on 287 total projects since 2010; data for 2019–21 were incomplete as of the time of this writing.⁸⁰ In a speech to Pacific leaders, former secretary general of the Pacific Islands Forum, Dame Meg Taylor, noted trade, aid, and investment from China to the region had increased and argued, "China's interests in the geopolitics of this region are inextricably tied to its economic interests."⁸¹ Despite welcoming aid and economic ties from China, PICs have made clear they are forging their own path, and many countries have emphasized they are not willing to sacrifice their domestic interests at the behest of Beijing. For example, in 2016, PRC Foreign Minister Wang Yi claimed, "Fiji supported China's proposition on the issue of the South China Sea," but Fijian officials

75. Allen, Saunders, and Chen, *Chinese Military Diplomacy*.

76. Richard Pruett, *Navigating the Rift between Micronesia and the Pacific Islands Forum*, Asia Pacific Bulletin no. 552 (Honolulu: East-West Center, March 2, 2021).

77. Herlevi, "Many Contenders Eye."

78. Styan, "China's Maritime Silk Road," 203.

79. Styan, "China's Maritime Silk Road."

80. "Lowy Institute Pacific Aid Map," Lowy Institute Pacific Aid Map, n.d., <https://pacificaidmap.lowyinstitute.org/>.

81. Dame Meg Taylor, "Conference on China and the Pacific: The View from Oceania" (speech, National University of Samoa, Apia, Samoa, February 25, 2015).

quickly denied these claims, stating Fiji had “no position” on the dispute.⁸² Some PICs’ decisions to maintain ties with Taiwan also reflect these policy choices.

Barrier 2: Recognition of Taiwan

The second barrier to a PLA presence remains some countries’ diplomatic recognition of the Republic of China (Taiwan). Taiwan recognition represents a barrier because as long as a country recognizes Taiwan, PRC civilian diplomats and PLA representatives will not directly engage with the country. China’s long-term goal is to ensure no country in the region recognizes Taiwan.

In September 2019, China found success when Kiribati and the Solomon Islands switched recognition to the People’s Republic of China, thereby reducing the barriers to entry for the People’s Liberation Army in these locations. In the Solomon Islands, Prime Minister Manasseh Sogavare stated the decision to switch was made, in part, to help support the country’s “national development objectives and sustainable development goals.”⁸³ Thus, reducing barriers for China is inextricably linked to the economic benefits Beijing can provide, though the decision in the Solomon Islands was not without controversy.⁸⁴ In Kiribati, though the decision to switch was controversial, it was also reflective of earlier eras when “checkbook diplomacy” between Beijing and Taipei prompted countries to switch.⁸⁵ In September 2019, Taiwan Minister of Foreign Affairs Joseph Wu announced the embassy in Kiribati would be closing.⁸⁶ As already discussed, Kiribati is consequential because of the former Chinese satellite-tracking station on the Tarawa atoll; thus, this diplomatic shift represents an opportunity for the People’s Liberation Army to establish a presence in Micronesia.

Yet, PLA engagement remains constrained in the four remaining PICs that recognize Taiwan: the Marshall Islands, Nauru, Palau, and Tuvalu. The Marshall Islands and Palau are also the Freely Associated States of the US, which represents dual barriers to diplomatic or security engagement from the People’s Liberation Army. Nauru and Tuvalu have both made standing by Taiwan an issue of solidarity among small island nations. Nauru encountered controversies with Chinese diplomats in 2018. During a Pacific Islands Forum event, officials from Nauru requested the PRC delegation use their personal passports rather than their diplomatic passports, and Chinese diplomats strongly protested.⁸⁷ Immediately following the diplomatic complaint, Nauru’s President Baron Waqa

82. Zhang Jingya, ed., “Fiji Supports China’s Proposition on South China Sea Issues: Ministers,” China Central Television (website), April 14, 2016, <http://english.cctv.com/2016/04/14/ARTIHU1FeYHJrwOjBdcCAYfT160414.shtml>; and “Fiji Quick to Deny Supposed South China Sea Support,” Radio New Zealand (website), April 15, 2016, <https://www.rnz.co.nz/international/pacific-news/301556/fiji-quick-to-deny-supposed-south-china-sea-support>.

83. Manasseh Sogavare, “Statement by the Prime Minister Hon. Manasseh Sogavare on Switch to China,” *Solomon Times* (website), September 20, 2019, <https://www.solomontimes.com/news/statement-by-the-prime-minister-hon-manasseh-sogavare-on-switch-to-china/9362>.

84. “‘Do Not Ignore Auki Communique,’ Malaita Premier Cautions Leaders,” *Solomon Times* (website), May 5, 2020, <https://www.solomontimes.com/news/do-not-ignore-auki-communique-malaita-premier-cautions-leaders/9796>.

85. Jian Yang, *The Pacific Islands in China’s Grand Strategy: Small States, Big Games*, 2011 ed. (London: Palgrave Macmillan, 2011).

86. Lawrence Chung, “Taipei Down to 15 Allies as Kiribati Announces Switch of Diplomatic Ties to Beijing,” *South China Morning Post* (website), September 20, 2019, <https://www.scmp.com/news/china/diplomacy/article/3029626/taiwan-down-15-allies-kiribati-announces-switch-diplomatic>; and Pala, “China Could Be in Reach.”

87. Foreign Ministry Spokesperson’s Office, “中国参加太平洋岛国论坛遭台湾‘友邦’刁难外交部强硬表态” [China encounters Taiwan ‘ally’ making things difficult on attending Pacific Islands Forum, and PRC foreign ministry issues tough statement], Haiwai Net (website), September 5, 2018, http://m.haiwainet.cn/middle/3541083/2018/0905/content_31391009_1.html.

demanded a formal apology from China, describing the diplomats' behavior as "disrespecting the Pacific."⁸⁸ In Tuvalu, Minister for Justice, Communication and Foreign Affairs Simon Kofe stated his country had faced "pressure" following the diplomatic switches of Kiribati and the Solomon Islands.⁸⁹ In a 2019 interview, Kofe stated the Tuvalu government had no plan to sever ties with Taiwan, and Kofe has "expressed his backing for . . . a group to unite Taiwan's four remaining Pacific allies."⁹⁰

Barrier 3: The Presence of the United States and External Actors

The US presence in the PICs—especially, the unique security role among the Freely Associated States in Micronesia—presents a substantial barrier to PLA engagement in the North Pacific. Writings of the People's Liberation Army note the central importance of Guam in the SIC, but the COFA represents a significant political barrier to China's military engagement in the Federated States of Micronesia, the Marshall Islands, and Palau. Under the COFA, "the United States has full authority and responsibility for security and defense matters" in the Freely Associated States and, thus, the "option to foreclose access to or use . . . of any third country."⁹¹ Thus, any presence of foreign military forces, including the People's Liberation Army, would have to be coordinated with the United States. Because of the COFA, the protection of certain EEZs is also of importance to the United States and COFA states. For example, in November 2020, China Global Television Network showed a manned submersible diving in the Marianas Trench. In 2018, the Ministry of Natural Resources research vessel *Xiang Yang Hong 01* (向阳红01) conducted surveys in Palau's waters. According to the Asia Maritime Transparency Initiative, China had 25 ships operating in the Indo-Pacific between April 2019 and March 2020.⁹² Officials from Palau have voiced concerns about illegal fishing in their EEZ and requested assistance from the US Coast Guard to help monitor the EEZ.⁹³

In addition to the US presence serving as a barrier to PLA military activity in Micronesia, traditional partners in Melanesia and Polynesia have presented challenges to a larger PLA presence in those locations. In the South Pacific, Australia and New Zealand are often treated "as if they were umbilical twins," but each country has reinvigorated its role in the region in

88. Reuters Staff, "Nauru Blasts 'Insolent' China for Speaking out of Turn at Meeting," Reuters (website), September 5, 2018, <https://www.reuters.com/article/us-pacific-forum-china-idUSKCN1LL0AC>; PACNEWS, "Forum to Demand Apology from China," Radio New Zealand (website), September 6, 2018, <https://www.rnz.co.nz/international/pacific-news/365814/forum-to-demand-apology-from-china>; and Stephen Dziedzic (@stephendziedzic), "'He's a nobody!' Here's Nauru's President Baron Waqa blasting a Chinese diplomat who he clashed with earlier this week at the Pacific Islands Forum," Twitter, September 6, 2018, 10:04 pm, <https://twitter.com/stephendziedzic/status/1037521820029607936>.

89. "Tuvalu: Pacific Nation Turns Down Chinese Islands and Backs Taiwan," *BBC News* (website), November 21, 2019, <https://www.bbc.com/news/world-asia-50501747>.

90. "Tuvalu: Pacific Nation Turns Down."

91. Compact of Free Association Amendments Act of 2003, Pub. L. No. 108-188, 117 Stat. 2820–26.

92. China Global Television Network, *China Livestreams Manned Submersible Dive at Mariana Trench's Bottom* (Beijing: China Global Television Network, 2020), YouTube video, <https://www.youtube.com/watch?v=w1GChSH-yd8>; Greene, "Chinese Research Vessel"; and "Survey of Marine Research Vessels."

93. "Republic of Palau Coordinates with US Coast Guard, Partners to Detain Illegal Fishing Vessel off Palau," Defense Visual Information Distribution Service (website), December 22, 2020, <https://www.dvidshub.net/news/385667/republic-palau-coordinates-with-us-coast-guard-partners-detain-illegal-fishing-vessel-off-palau>.

distinct ways.⁹⁴ Australia has funded military installations in countries like Fiji out of concerns China might fund a base in Melanesia, whereas New Zealand's Pacific Reset policy has focused on political partnerships and engagement with Pacific regional institutions.⁹⁵ China has diplomatic relations with some regional organizations, but military activity has not been a focal point for these organizations. New Zealand has also noted as the region becomes "an increasingly contested space," traditional partners must maintain their influence in the region.⁹⁶ Other traditional partners include the United Kingdom, which has reestablished diplomatic posts in three countries; France, which has "the second largest EEZ in the world" thanks to its Pacific territories; and Japan, which is reengaging through its Free and Open Indo-Pacific policy.⁹⁷ All of this activity makes China's establishment of any sort of military foothold more difficult because PLA activities are likely to be met with questions from both local voices and external countries with interests in the Pacific.

Conclusion: Trends to Watch

China's engagement with the PICs has evolved over the past decade. Though its economic potential has been welcome in many countries, China's military activities and attempts to isolate Taiwan have generated controversy. In 2019, Minister of National Defense Wei Fenghe announced, "China is willing to deepen military exchanges and cooperation with the Caribbean countries and Pacific island countries under the framework of the Belt and Road Initiative," a willingness that could open new forms of security cooperation.⁹⁸ The PLA's presence is consistent with China's maritime goals, but the United States remains the largest naval power in the region. Thus, a tension between the PLA's desire to achieve benchmarks in the SIC and the military's ability to reduce barriers to its own operational access remains.

For PLA benchmarks, we discussed military diplomacy and PLAN deployments to the region, which are both establishing a foundation for China's military presence. Despite these military interactions, the PLA presence has not yet resulted in a military facility in Oceania, despite possible discussions with countries like Fiji that share China's interest in global peacekeeping. Moreover, though PLA views of island chains are important, these conceptualizations are not

94. Nicola Baker, "New Zealand and Australia in Pacific Regionalism," in *The New Pacific Diplomacy*, 137; "Stepping-Up Australia's Engagement with Our Pacific Family," Department of Foreign Affairs and Trade (website), n.d., <https://www.dfat.gov.au/geo/pacific/engagement/Pages/stepping-up-australias-pacific-engagement>; and Department of the Prime Minister and Cabinet, *Strategic Intentions 2018–2022*, G.48 (Wellington, NZ: Department of the Prime Minister and Cabinet, 2018).

95. Cabinet External Relations and Security Committee, *The Pacific Reset: The First Year*, ERS-18-MIN-0028 (Wellington, NZ: Department of the Prime Minister and the Cabinet, December 2018).

96. Department of the Prime Minister and the Cabinet, *Strategic Intentions*.

97. Latika Bourke, "UK to Open Diplomatic Posts in the Pacific, Citing Security Concerns," *Sydney Morning Herald*, April 20, 2018; Helene Goiran, *The Role of the French Military on Key Issues for Oceania*, Asia Pacific Bulletin no. 416 (Honolulu: East-West Center, March 26, 2018); Government of Japan, "Towards Free and Open Indo-Pacific" (PowerPoint presentation, Tokyo, November 2019), <https://www.mofa.go.jp/files/000407643.pdf>; and Coby Goldberg, "Germany's Indo-Pacific Vision: A New Reckoning with China or More Strategic Drift?," *Diplomat* (website), September 15, 2020, <https://thediplomat.com/2020/09/germanys-indo-pacific-vision-a-new-reckoning-with-china-or-more-strategic-drift/>.

98. Xinhuanet, "China to Deepen Military Cooperation with Caribbean Countries, Pacific Island Countries: Defense Minister," ed. Chen Zhuo, China Military Online (website), July 8, 2019, http://eng.chinamil.com.cn/view/2019-07/08/content_9551157.htm.

the only driver of PLA engagement in the region. Instead, economic and diplomatic imperatives under the Belt and Road Initiative remain an important element of the relationship, even if aid is not a predictor of military interactions, as explained with the statistical model on aid and diplomacy. Leaders of the People's Liberation Army may want to appear supportive of China's overall foreign policy goals to show their political loyalty to the party; advocating military cooperation as a part of the Belt and Road Initiative would be useful for this purpose. Rather than achieving military presence that could allow the People's Liberation Army to operate in the SIC, these other factors need to be monitored.

The PLA's presence in the region has increased, but major barriers remain. First, PICs have agency and continue to advocate for protecting ocean resources, dealing with climate change, and preventing the "militarisation of the Pacific," a quote that has been attributed to former Vanuatu Minister of Foreign Affairs Ralph Regenvanu.⁹⁹ Second, diplomatic recognition of Taiwan remains an impediment to PLA presence in four countries in the region, and the COFA remains a significant barrier to PLA presence in Micronesia. Similarly, because Australia and New Zealand have reinvigorated their foreign policy approaches, and European countries have returned to Oceania, Melanesian and Polynesian countries will have more opportunities for economic, military, and diplomatic cooperation with a wide variety of external partners.

China's military presence is expanding globally, but it remains constrained in Oceania. Eventually, if China's Belt and Road Initiative goals continue to be linked to connectivity across the globe, then the People's Liberation Army may want to create its own system of springboards in the Pacific. Such an occurrence is not a foregone conclusion. Scholars of the People's Liberation Army have noted the expenses associated with basing, and economic ties in Oceania are not nearly as significant as China's economic activity in the Indian Ocean. Thus, the People's Liberation Army may be more focused on combining the economic and diplomatic goals of the People's Republic of China with the military's outward trajectory. If this supposition were true, then the story of PLA presence may be "far more complicated, interesting, and potentially developmental than it is currently portrayed," as Deborah Bräutigam notes in her analysis of "debt-trap diplomacy."¹⁰⁰ The authors believe the intersection of PLA engagement within China's larger foreign policy establishment and how China's diplomats work together to achieve their objectives in the Pacific demands further inquiry. Understanding the interplay between China's geostrategic goals, PLA views, and the imperatives of the PICs themselves is critical to mapping the success and failure of strategic influence in the region.

Note on Data Used in Chapter

We statistically modeled PRC defense diplomacy in the PICs and East and Southeast Asia as a function of several factors: PRC aid with diplomatic intent, the country's GDP, the number of civilian diplomatic interactions (visits, etc.) between the country and the People's Republic of China,

99. Dame Meg Taylor, "Griffith Asia Lecture 2019" (speech, Griffith University, Brisbane, Australia, November 11, 2019).

100. Deborah Brautigam, "A Critical Look at Chinese 'Debt-Trap Diplomacy': The Rise of a Meme," *Area Development and Policy* 5, no. 1 (2020): 12.

whether the country has diplomatic relations with the People's Republic of China or Taiwan, and region (either PIC or non-PIC). Our data sample, which includes most of the Asia-Pacific and PICs, was drawn from the AidData report *Ties That Bind* (which used a sample size of 19). The countries included in the model are Brunei, Cambodia, Fiji, Indonesia, Kiribati, Laos, Malaysia, (the Federated States of) Micronesia, Mongolia, Myanmar, North Korea, Papua New Guinea, Philippines, Samoa, Thailand, Timor-Leste, Tonga, Vanuatu, and Vietnam. We excluded certain countries that might have been confounding variables. Australia, Japan, New Zealand, Singapore, and South Korea were in the original AidData but are not included in our study because the large size of these countries' economies would skew the analysis. At the other end of the spectrum, we also excluded Nauru because it was a statistical outlier: Nauru received a massive surge in PRC aid relative to its miniscule economy, and the inclusion of the country caused difficulties for our statistical model given the small sample size (19). Future research should examine Nauru because of its status as an outlier and its continued recognition of Taiwan.

Due to concerns about data sparseness on some measures for individual country-years, we pooled the data for each country across all years available. For the independent variables, our data covers 2000 to 2016 (aid with diplomatic intent and civilian diplomatic visits). Our dependent variable (PLA diplomacy) covers 2003 to 2016. Though the years available for the two data sets (AidData and the National Defense University) do not exactly overlap, this is not a major issue because, in both cases, we pooled the data over many years. Each country's count of PRC military diplomatic interactions thus reflects a long-term, cumulative effect of PRC aid and civilian diplomacy, rather than short-term time series or year-by-year responses.

To measure how much aid China gives, we used "PRC aid with diplomatic intent" as defined by AidData. (PRC diplomatic aid is measured as the total dollar value, inflation-adjusted to 2014 US dollars [in billions]). Rather than considering the raw total of aid to a country, however, our measure of interest was aid with diplomatic intent as a percentage of the country's GDP. We hypothesized, as in the case of Djibouti, PRC aid would have the greatest impact per dollar in small, relatively underdeveloped economies without access to other sources of investment capital. Civilian diplomacy was measured as the total number of PRC civilian diplomatic interactions with the country (either in China or abroad) as defined by AidData. We included the civilian diplomacy variable because recent analysis found the "volume of Chinese military diplomatic activity with a particular country generally conforms to the hierarchical priority the Chinese foreign policy apparatus has assigned to that country."¹⁰¹ In other words, PRC military diplomats generally follow their civilian counterparts in which countries they prioritize. A dummy variable for whether the country is a PIC was included so we could differentiate the effects among these countries from others included in our data.

Additionally, we included a measure of each country's economic size in the model: the country's GDP in 2014 in billions of US dollars. Countries with a larger GDP tend to have larger and more developed militaries. According to a 2017 National Defense University study, PLA military diplomacy in Asia focuses on the region's major military powers.¹⁰² The importance of

101. Allen, Saunders, and Chen, *Chinese Military Diplomacy*, 4.

102. Allen, Saunders, and Chen, *Chinese Military Diplomacy*, 3.

this variable is not just its indirect effect on military size. (Though we could have included a separate variable with data on countries' military spending, the model's small number of observations [19] did not permit adding many variables; as a result, we chose to add country GDP as a proxy both of the country's potential for military spending and its overall economic attractiveness to China.) Countries in the Asia-Pacific with a larger GDP are also some of China's main economic partners, a pattern that might be correlated with both civilian and military PRC diplomacy.

For the model, we ran an ordinary least squares regression. We chose this method because it is simple to interpret, tends to perform better in small sample sizes, and is a suitable model type for our dependent variable. Among the results, PRC aid as a percentage of country GDP, the number of civilian diplomatic interactions, and whether the country was a PIC were statistically significant (the "p" value was less than 0.1, meaning the results of the study would be at least as extreme less than 10 percent of the time if the null hypothesis were true). Country GDP was statistically insignificant, but we kept this variable in the model as a control variable due to possible interrelationships with the other variables. Aid had an inverse relation with military diplomacy: Each percentage point PRC aid added to a country's GDP translated into about 3.5 fewer interactions with the People's Liberation Army. Civilian diplomatic visits were positively related: Each additional civilian visit translated into about 0.22 additional military diplomatic interactions. Finally, being a PIC made a country much less likely to receive PLA diplomacy: On average, PICs received 13.2 fewer visits than non-PICs.

The authors wish to thank Yen-Zhi Peng, political and security affairs intern at the National Bureau of Asian Research, for collecting data on PLAN visits to the PICs from 2014 to 2020. Because the National Defense University military interactions used in our statistical model include port calls through 2016, we confirmed the data for 2014 to 2016 and collected data on PLAN visits from 2017 to 2020. In cases in which one ship made multiple stops at various locations, we consider this one "voyage," even though the vessel may have conducted multiple activities in one country.

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PLA Rocket Force as a Service: New Team Player or Increasingly Irrelevant?

Roderick Lee

Introduction

What is the People's Liberation Army (PLA) Rocket Force's (PLARF's) role in the People's Liberation Army of 2020 and beyond? The People's Republic of China (PRC) Central Military Commission (CMC) elevated the then-Second Artillery Corps into a service in late 2015 and renamed it the PLA Rocket Force. But PRC authoritative media outlets likened this elevation to a recognition of the practical reality the Second Artillery Corps was already fulfilling the roles and responsibilities of a fully vested military service.¹ Western assessments discussing recent trends in the PLA Rocket Force tend to concur with these PRC claims.² Service-specific changes within the PLA Rocket Force are relatively minor compared to those of the other services. However, with the People's Liberation Army's general efforts to create a modernized and joint force, the PLA Rocket Force's role within the organization appears to be changing in ways that do not necessarily point toward a trend of greater universal prominence.

This chapter reaches two conclusions about the PLA Rocket Force's future role within the People's Liberation Army. First, the PLA Rocket Force is becoming comparatively less relevant in the People's Liberation Army of 2020, although the service still retains a position of prominence in the realms of conventional and nuclear strike. Second, the PLA Rocket Force is quickly becoming a team player within the increasingly joint PLA warfighting team. These two statements are derived from the following key findings.

- The PLA Rocket Force no longer has a monopoly on nuclear counterattack capabilities, and the service is slowly losing its relative share of said capabilities to the PLA Navy (PLAN) and PLA Air Force (PLAAF). But the PLA Rocket Force remains the dominant service for nuclear-capable launch systems.

1. Cai Linlin 蔡琳琳, “专家解读: 第二炮兵更名为火箭军有几点考虑” [Expert interpretation: There are several considerations for the Second Artillery Corps to be renamed the Rocket Force], 新华网 [Xinhua Online], January 2, 2016, http://www.xinhuanet.com/mil/2016-01/02/c_128589302.htm.

2. David Logan, “PLA Reforms and China's Nuclear Forces,” *Joint Force Quarterly* 83 (4th Quarter 2016), https://ndupress.ndu.edu/Portals/68/Documents/jfq/jfq-83/jfq-83_57-62_Logan.pdf?ver=2016-10-19-102202-067.

- The PLA Rocket Force is quickly losing its relative share of conventional, long-range, precision-strike capabilities to the PLA Navy, PLA Air Force, and even the PLA Ground Force. But PLARF conventional, long-range, precision-strike systems still have a qualitative edge that has allowed the PLA Rocket Force to remain the primary enabler for follow-on precision strike from the other services. The People’s Liberation Army integrated large portions of the PLA Rocket Force’s operational force into the joint theater command-and-control (C2) system, including most of the service’s corps-level operational command elements. The PLA Rocket Force plays a minor role in overseas, nonwar military activities, especially in the present day.

This chapter reaches these key findings by evaluating multiple facets of the PLA Rocket Force as a means of objectively measuring the service’s relative contribution to and integration into the People’s Liberation Army as a whole. The evaluations that address the PLA Rocket Force’s contribution to wartime activities use a basic, quantitative approach to be as objective as possible. The numbers used in these evaluations are derived from authoritative Department of Defense sources whenever possible. The chapter also attempts to state all underlying assumptions involved in each evaluation. For less quantifiable issues, such as C2, the chapter uses authoritative PLA sources whenever possible. When sources do not provide sufficient information to make a definitive conclusion, the evaluation notes a lower confidence level.

Expanding the Strategic Space

A crucial prerequisite concept that likely drives many PLA—and, thus, PLARF—modernization decisions is an implied PLA requirement to “support the expansion of the PRC’s strategic space.”³ The People’s Liberation Army defines strategic space as the area required by a country for survival and development free of external interference.⁴ The bounds of a country’s strategic space are defined by both the extent of the country’s national interests and the range in which its military can project power. This concept aligns with the PLA’s stated mission of being able to protect PRC sovereignty, rights, and interests.⁵

The 2013 edition of *Science of Military Strategy* clarifies the People’s Republic of China is currently expanding its strategic space “toward the two oceans” (向两洋地区拓展), “toward space” (向太空拓展), and “toward cyberspace” (向信息网络空间拓展).⁶ This publication goes on to state to accomplish this expansion of strategic space, the People’s Liberation Army must be able to exert joint C2 within the second island chain (SIC) and have a “comprehensive strike capability” (综合打击能力) as far as the western Pacific Ocean and Indian Ocean.⁷ In a sense, this definition

3. Academy of Military Science Military Strategy Studies 军事科学院军事战略研究部, *战略学* [Science of military strategy] (Beijing: Military Science Press, 2013), 241.

4. Academy of Military Science, *Science of military strategy*, 241.

5. State Council Information Office of the People’s Republic of China (PRC), “China’s National Defense in the New Era” (white paper, State Council Information Office of the PRC, Beijing, China, July 2019).

6. Academy of Military Science, *Science of military strategy*, 246–48.

7. Academy of Military Science, *Science of military strategy*, 266.

of strategic space creates an outer boundary for the PLA's typical wartime operations somewhere between 4,000 to 6,000 kilometers beyond China's territorial borders.

Uniqueness of the PLA Rocket Force

The PLA Rocket Force views itself as a unique warfighting force within the People's Liberation Army and identifies itself as the main provider of both nuclear and conventional, long-range strike.⁸ Given the concept of strategic space, the historical perception of PLARF uniqueness makes a great deal of sense. Before the twenty-first century, the then-Second Artillery Corps was the only component of the People's Liberation Army capable of generating kinetic effects beyond China's immediate periphery and, thus, likely established the outer edge of the country's strategic space.

The Science of Second Artillery Campaigns explicitly states one of the key characteristics of the Second Artillery Corps was its ability to strike targets more than 200 kilometers away, "deep in the enemy's strategic areas."⁹ The document elaborates the advantages of the Second Artillery Corps included the abilities to engage targets at long ranges, change launch directions rapidly, strike targets with precision, and field various types of warheads. Other advantages included the improved ability to penetrate defenses, relative survivability, and the ability to achieve surprise.¹⁰ The 2013 edition of *Science of Military Strategy* reiterates the Second Artillery Corps was the main component of the conventional, long-range strike force, though the updated document calls for the fielding of systems with a range of 1,500 kilometers or more.¹¹

PLA Rocket Force's Contributions to Wartime Activities over Time

The PLA Rocket Force employs two discrete types of campaigns that can be conducted independently or—more likely—as part of a larger, joint campaign.¹² The first campaign, the "nuclear counterattack campaign" (核反击战役), is to be conducted in concert with other services.¹³ The second is the "conventional missile attack campaign" (常规导弹突击战役).¹⁴ The campaign literature specifies the types of campaigns in which the Second Artillery Corps is likely to execute a conventional missile attack. These types of campaigns are: joint firepower strike, joint blockade, joint island landing, joint border area counterattack, joint antilanding, joint urban offensive, joint antiair raid, army mountain offensive, and air force airborne.

In these campaigns, PLARF conventional missile units are to be used against targets of strategic importance that other services cannot reach due to geographic distance or the presence

8. Yu Jixun 于际训, ed., 第二炮兵战役学 [The science of Second Artillery campaigns] (Beijing: People's Liberation Army Press, 2004), 297; and Academy of Military Science, *Science of military strategy*, 229.

9. Yu Jixun, *Second Artillery campaigns*, 319.

10. Yu Jixun, *Second Artillery campaigns*, 257.

11. Academy of Military Science, *Science of military strategy*, 302.

12. Zhang Yuliang 张玉良, ed., 战役学 [Science of campaigns] (Beijing: National Defense University Press, 2006), 616.

13. Yu Jixun, *Second Artillery campaigns*.

14. Zhang Yuliang, *Science of campaigns*, 616; and Yu Jixun, *Second Artillery campaigns*.

of overwhelming adversarial forces. This targeting approach stems from both the unique PLARF traits discussed above and the limited number and relative price of PLARF munitions.¹⁵

Compared to 10 or 15 years ago, when the People's Liberation Army wrote most of the publicly available campaign literature, the organization has a much larger and more robust toolbox of options today with which to execute various wartime activities. The next two sections evaluate the PLA Rocket Force's relative ability to contribute to the key activities associated with a nuclear counterattack campaign (conducting nuclear counterstrike activities) and a conventional missile attack campaign (conducting long-range, precision strike activities).

PLA Rocket Force's Contribution to Nuclear Counterattack

The People's Liberation Army has long acknowledged the PLA Rocket Force would not be the sole executor of a nuclear counterattack campaign. As mentioned earlier, *The Science of Second Artillery Campaigns* suggests though the Second Artillery Corps was the main component of a joint nuclear counterattack campaign, the nuclear forces of the navy and air force provided additional dimensions to the nuclear counterattack activity, even though neither service appeared to have an operational nuclear capability at the time.¹⁶ More recently, the 2015 edition of the National Defense University's version of *Science of Military Strategy* suggests PLARF nuclear counterattacks should be complemented by the PLA Navy's submarine-based nuclear forces.¹⁷

Provided in this section for the purpose of tracking the PLA Rocket Force's relative contribution to a hypothetical, initial, joint, nuclear counterattack campaign is an assessment of PLA systems that could deliver nuclear weapons as of 2010, 2016, and 2020. This evaluation does not account for missile reloads for follow-on strikes or attrition. The data used in this section are entirely derived from the Office of the Secretary of Defense's *Military and Security Developments Involving the People's Republic of China* reports.¹⁸ This section uses 2016 instead of 2015 as an intermediate point to capture the introduction of the nuclear-capable Dongfeng 26 (DF-26) into the PLA Rocket Force's inventory as well as the operationalization of the PLA Navy's nuclear force through the probable first nuclear deterrence patrol by a *Jin*-class ballistic missile submarine (nuclear-powered) (SSBN).

Despite the theoretical jointness discussed in PLA publications, this depiction of each PLA service's potential contribution to a joint, nuclear counterattack campaign shows the Second Artillery Corps was the only component of the People's Liberation Army capable of meaningfully contributing to a nuclear counterattack campaign in 2010. Although the PLA Navy fielded a

15. Academy of Military Science, *Science of military strategy*, 304.

16. Yu Jixun, *Second Artillery campaigns*, 297.

17. Xiao Tianliang 肖天亮, ed., *战略学* [Science of military strategy] (Beijing: National Defense University Press, 2015), 235.

18. Office of the Secretary of Defense (OSD), *Military and Security Developments Involving the People's Republic of China 2010* (Washington, DC: OSD, 2010); OSD, *Military and Security Developments Involving the People's Republic of China 2016* (Washington, DC: OSD, 2016); and OSD, *Military and Security Developments Involving the People's Republic of China 2020* (Washington, DC: OSD, 2020).

single Type 092 (XIA-class) SSBN, the 2010 *Military and Security Developments* report states this capability was questionable at best.¹⁹

A trend began to emerge by 2020 that suggested the PLA Rocket Force was losing its relative share of the nuclear counterattack mission. Although the PLA Rocket Force continues to maintain the lion's share of the PLA's total number of nuclear-capable launch systems, recent PLAN and PLAAF acquisitions of nuclear-capable systems are reducing the rocket force's relative standing. This chapter defines "nuclear launch system" as independent vehicles that are currently in or projected to be in the PLA's inventory and that can carry one or more nuclear warheads. For example, a DF-31AG counts as a single-launch vehicle, despite its ability to carry multiple warheads. Only systems specifically identified by a Department of Defense report as being nuclear-capable are counted.

Once the PLA Navy commissions the two additional *Jin*-class SSBNs that were being fitted out as of mid-2020 and the PLA Air Force fully equips its one hypothetical nuclear bomber brigade with Xian H-6Ns, the trend will become even more apparent.²⁰ The projections in tables 7-1 and 7-2 assume two additional *Jin*-class SSBNs, 36 nuclear-capable H-6Ns, and 100 additional PLARF nuclear-capable launch systems will have entered the force by 2025. As a note, the projection date is arbitrary. The 36 H-6N nuclear bombers is a high estimate based on the author's understanding of the number of airframes a PLAAF aviation brigade operates and the author's assumption H-6Ns can only deliver one nuclear warhead using an air-launched ballistic missile. In addition, the assessment of the PLA Air Force having roughly 10 H-6Ns available for nuclear strike missions is the author's and is derived from the PLA Air Force's operation of at least six H-6Ns in 2019.

	2010	2016	2020	Projected (2025?)
PLARF	120	300	400	500
PLAN	12	48	48	72
PLAAF	0	0	10	36

Table 7-1. Number of nuclear-capable launch systems in the People's Liberation Army

	2010	2016	2020	Projected (2025?)
PLARF	91%	86%	87%	82%
PLAN	9%	14%	10%	12%
PLAAF	0%	0%	2%	6%

Table 7-2. Ownership of nuclear-capable launch systems as a percentage

19. OSD, *Military and Security Developments 2010*.

20. OSD, *Military and Security Developments 2020*; and Roderick Lee, "China's Air Force Might Be Back in the Nuclear Business," *Diplomat* (website), September 9, 2020, <https://thediplomat.com/2020/09/chinas-air-force-might-be-back-in-the-nuclear-business/>.

As the PLA Navy and PLA Air Force continue to field additional nuclear-capable systems, the PLA Rocket Force's relative contribution to nuclear counterattack operations will diminish unless the rocket force acquires many new, nuclear-capable systems to supplement its current inventory. The emergence of several dozen apparent missile silos at each of at least three sites in western China indicates the PLA Rocket Force may be on track to preserve its relative share of nuclear forces. But whether all silos will contain nuclear-armed missiles or whether the PLA Navy or PLA Air Force will also increase their contributions to the PLA's overall nuclear triad remains to be seen.

PLA Rocket Force's Contribution to Conventional Precision Strike

The trend of the PLA Rocket Force losing its relative share of missions over time is more apparent in the PLA's conventional precision-strike capabilities. Much like the evaluation of service contributions to nuclear counterattack campaigns, this section compares the change in the PLA Rocket Force's contributions to conventional precision-strike launch systems over time to that of the other services. This comparison makes the following assumptions and considerations.

- This comparison considers individual launch systems rather than launch vehicles. For example, a CJ-10 launcher counts as three launch systems because it fields three launch canisters.
- Based on *The Science of Second Artillery Campaigns* referencing 200 kilometers as the range required to strike adversary targets in “deep strategic areas,” this evaluation only considers guided munitions with a range of more than 200 kilometers.
- The evaluation treats the PLA Rocket Force's entire inventory of intermediate- and medium-range ballistic missiles as “conventional” capabilities, even though some of these missiles are dual-capable and may be allocated to nuclear missions.
- The Type 052D (LUYANG III-class) series of guided-missile destroyers and Type 055 (RENHAI-class) guided-missile cruisers have a land-attack cruise missile (LACM) capability.
- Surface combatants of the PLA Navy may be allocated an extremely land-attack-heavy load out, with two-thirds of all vertical-launch system cells loaded with LACMs.
- This estimate does not count the potential use of dedicated, anti-ship cruise missiles (such as YJ-83s) or submarine-launched cruise missiles for long-range strikes. The author acknowledges Type 093A (SHANG II-class) nuclear-powered attack submarines may have a limited LACM capability. Adding such systems would only favor PLAN numbers; as a result, this potential capability does not change the findings of this evaluation.
- Xian H-6K bombers operate with a maximum loadout of six LACMs.

- The PLA Ground Force’s new, guided, 370-mm multiple rocket launcher has a range of more than 200 kilometers. Given the 2020 *Military and Security Developments* report states the People’s Liberation Army fields rocket artillery systems such as the 300-mm PHL-03 that are capable of striking targets across the Taiwan Strait, and sources indicate the 370-mm rocket artillery system can strike targets at 300 kilometers and beyond, this evaluation uses a range of “in excess of 200 kilometers.”)

Figure 7-1 conveys the number of PLA precision strike launch systems each service had at its disposal in the years 2012, 2016, and 2020.

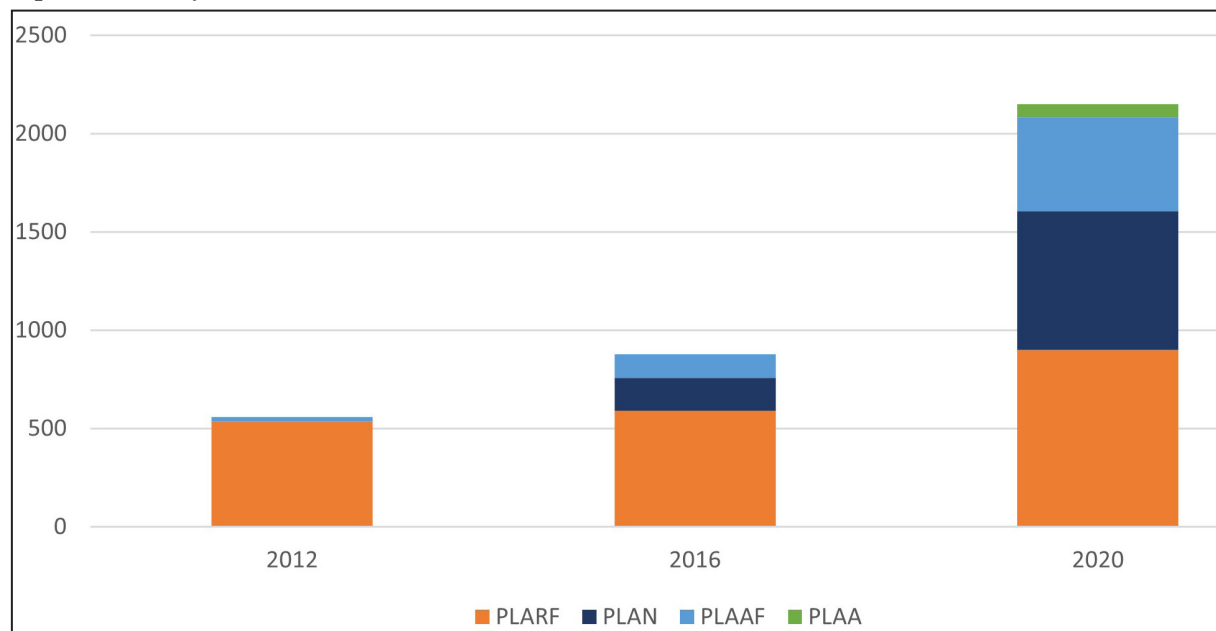


Figure 7-1. PLA precision strike launch systems by service

In 2012, the PLA Rocket Force was essentially the sole provider of long-range conventional precision strike, with only a handful of PLAAF H-6K bombers observed entering service toward the end of the year. By 2016, the PLA Navy’s introduction of the LUYANG III-class guided-missile destroyer and the entering into service of additional PLAAF H-6K bombers reduced the PLA Rocket Force’s relative share of precision-strike systems. In 2020, the continued delivery of H-6K bombers and surface combatants capable of launching LACMs and the introduction of a new 370-mm rocket artillery system ate further into the PLA Rocket Force’s relative share of conventional-strike systems (see table 7-3).²¹

Although the PLA Rocket Force’s relative share of all conventional, long-range precision-strike systems has diminished over the past decade, the PLA Rocket Force still plays a major role in firepower strikes. Ballistic and hypersonic systems owned by the PLA Rocket Force are still more survivable in the face of air defense systems and often have longer maximum kinematical ranges (the overall average range of the rocket force’s conventional-strike force is roughly 1,800 kilometers,

21. “YJ-18,” Missile Defense Project (website), updated July 28, 2021, <https://missilethreat.csis.org/missile/yj-18/>; OSD, *Military and Security Developments 2020*; and Liu Zhen, “China’s Military Gives Glimpse of Updated Long-Range Rocket System,” *South China Morning Post* (website), January 9, 2021, <https://www.scmp.com/news/china/military/article/3117044/chinas-military-gives-glimpse-updated-long-range-rocket-system>.

	2012	2016	2020
PLARF	96%	67% (-29%)	42% (-25%)
PLAN	0%	19% (+19%)	33% (+14%)
PLAAF	4%	14% (+10%)	22% (+8%)
PLA Ground Force	0%	0%	3% (+3%)

Table 7-3. The PLA services' share of the total number of precision-strike systems

as opposed to the PLA Navy's 500 kilometers and PLA Air Force's 1,000–1,500 kilometers). In virtually all foreseeable, near-term scenarios, PLARF conventional systems would remain the most practical means of degrading adversary air defenses, airfields, and maritime forces; only then would PLAN and PLAAF assets conduct follow-on strikes, using mostly less survivable—but cheaper—cruise missiles.

The growing availability of long-range precision munitions across the People's Liberation Army has resulted in the PLA Rocket Force losing its near-monopoly on long-range precision-strike systems. From a numerical perspective, this trend suggests a decrease in the PLA Rocket Force's relative ability to contribute to long-range precision-strike missions. Qualitative factors, however, still help the PLA Rocket Force maintain a position of crucial importance, albeit in the more specialized role of force enabler rather than sole force provider. In this specialized role, the PLA Rocket Force continues to seek and find a unique role within the People's Liberation Army.

Command and Control (C2) of PLARF Conventional Operations

Although the PLA Rocket Force appears to be losing its relative share of kinetic systems, the service is gaining in its integration with the rest of the People's Liberation Army's C2 structure. Setting aside the question of PLA nuclear C2, the PLA's post-reform structure appears to make great efforts to integrate the PLA Rocket Force's conventional forces into the larger joint theater C2 structure.

Before 2016, the People's Liberation Army had virtually no experience in exercising joint command over its forces or routinely operating in a joint environment. Exceptions to this rule were the General Staff Department's creation of the CMC Joint Command [军委联指] to oversee the Nanjing Military Region and Guangzhou Military Region during a Taiwan scenario in the early 2000s and the East Sea Fleet's creation of the East Sea Joint Command [东海联指] around 2012. The People's Liberation Army rarely exercised these joint command authorities or trained its forces to operate in a joint environment.²² With the creation of the joint theater commands in 2016, the People's Liberation Army finally had a means of consistently exerting C2 functions across all services, including the PLA Rocket Force.²³ Although the 2013 *Science of Military Strategy*

22. Liu Wei 刘伟, ed., 战区联合作战指挥 [Theater joint operations command] (Beijing: National Defense University Press, 2016), 31.

23. Liu Wei, *Joint operations command*, 340.

states the Central Military Commission retained a decision-making role over the application of conventional missile forces, this retention does not necessarily suggest conventional missile forces fall outside of the theater command system.²⁴ The retention of the role simply suggests the Central Military Commission maintains strict rules of engagement for PLARF conventional units wherein the commission clearly defines the appropriate and inappropriate targets of these assets, but the commission leaves matters of force allocation and employment to the theaters. Figure 7-2, from the 2016 PLA publication *Theater Joint Operations Command*, clarifies how the People's Liberation Army integrates PLARF units into the theater command structure.²⁵

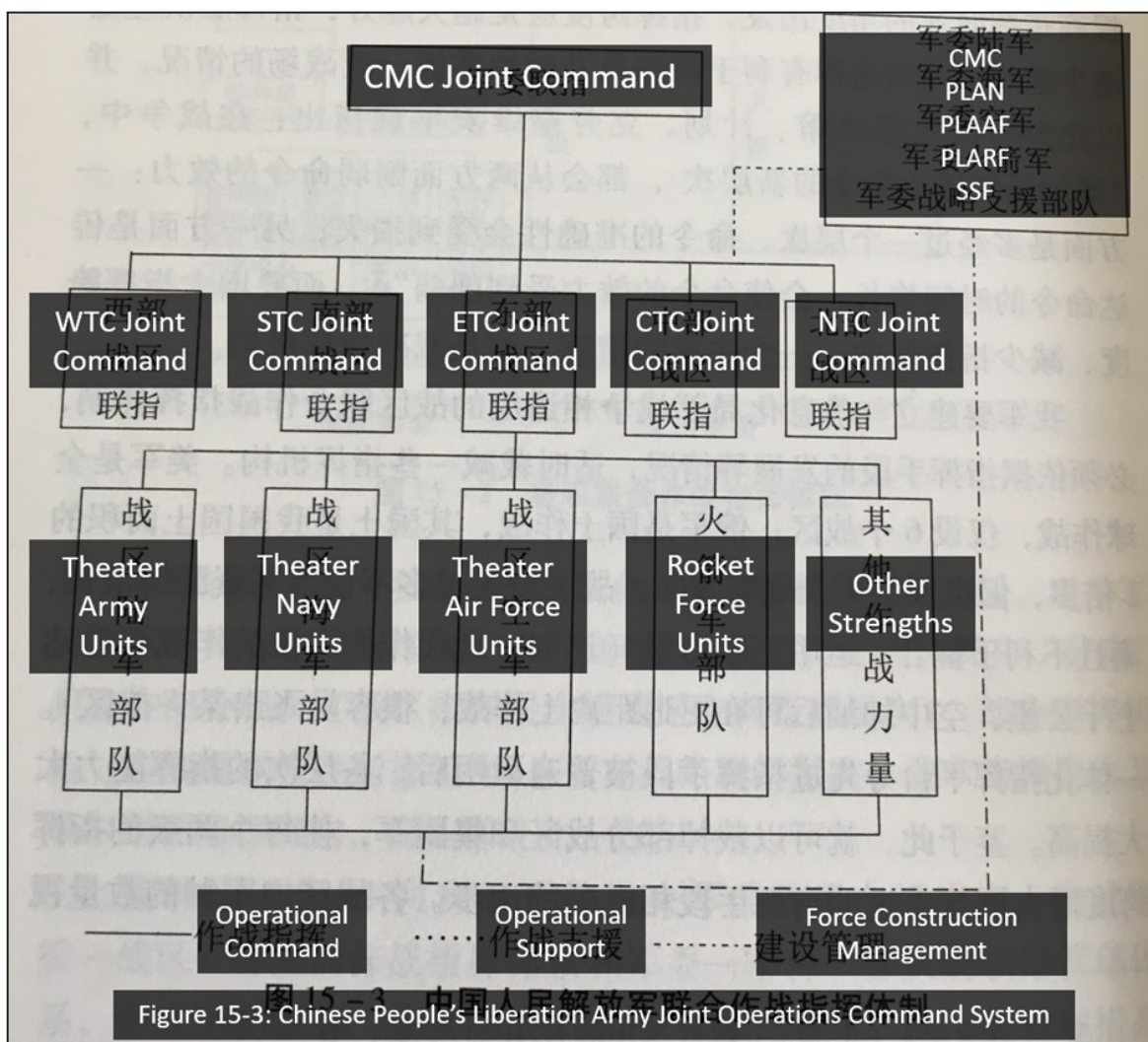


Figure 7-2. PLA joint operations command system

Although this PLA publication clearly states the People's Liberation Army integrates PLARF units into the joint theater command system, the document does not elaborate on the extent of integration. This section evaluates the extent to which the People's Liberation Army has integrated

24. Academy of Military Science, *Science of military strategy*, 303.

25. Liu Wei, *Joint operations command*.

PLARF units into the joint theater command construct. This evaluation refers to certain confidence levels according to the following criteria.

- High confidence: Sources explicitly identify the unit as a certain theater command rocket-force unit or state a unit is now part of a theater command system.
- Medium confidence: Sources identify the unit participating in theater training, activities, or operations.
- Low confidence: The unit appears in a source managed by a theater command or is a short-range ballistic missile or LACM unit that appears to fall under a theater command structure.

See table 7-4 for PLARF units and the theaters with which they are associated and tables 7-5 to 7-10 for the references from which this information has been derived.

As table 7-4 shows, despite the Central Military Commission retaining certain authorities over PLARF conventional missile operations, some (if not all) PLARF conventional units now operate as part of a larger joint warfighting team. Most notably, every theater command likely has a respective PLARF operational base to serve as a campaign command element for missile base campaigns.²⁶ The absence of reporting that associates Base 63 with a theater is not surprising because this unit is also located within the Southern Theater Command's area of responsibility, and Base 62 appears to serve the role of the Southern Theater Command's designated, corps-grade rocket force element.

In addition, theaters may have some responsibility over PLARF conventional strikes conducted between the first island chain and the SIC because some DF-21 and DF-26 brigades fall under a theater chain of command. This supposition is a departure from the author's previous view a higher-level headquarters might retain control over medium- and intermediate-range ballistic missile units intended for strategic targets. This change of view is driven by an additional source describing the DF-26-equipped 666th Brigade as having joined the theater command system in 2016.²⁷ The concept of theater commands exercising command authority outside the first island chain is corroborated by limited evidence theaters oversee PLAN training deployments in areas approaching the SIC and beyond.²⁸

26. Yu Jixun, *Second Artillery campaigns*, 46.

27. Yu Yingjie, Feng Jinyuan, and Chen Haijun, "Brigade's War-Realistic Exercise Forges East Wind Special Delivery Strategic Iron Fist," 火箭兵报 [*Rocket Force News*], September 27, 2017.

28. Roderick Lee, "The PLA Navy's ZHANLAN Training Series: Supporting Offensive Strike on the High Seas," *China Brief* 20, no. 7 (April 13, 2020), <https://jamestown.org/program/the-pla-navys-zhanlan-training-series-supporting-offensive-strike-on-the-high-seas/>.

Unit	Missile Type	Assessed Theater Association	Confidence	Rationale
Base 61		Eastern Theater Command	Medium	Featured in a theater WeChat account post.
612th Brigade	Medium-range ballistic missile	Eastern Theater Command - selective	Low - only certain circumstances	Theater WeChat post, but references a nonwar military activity.
613th Brigade	Short-range ballistic missile	Eastern Theater Command	Low	Based on comparisons to other units that have similar weapon systems and likely fall under the theater command system.
614th Brigade	Short-range ballistic missile	Eastern Theater Command	Low	Based on comparisons to other units that have similar weapon systems and likely fall under the theater command system.
615th Brigade	Short-range ballistic missile	Eastern Theater Command	Low	Based on comparisons to other units that have similar weapon systems and likely fall under the theater command system.
616th Brigade	Short-range ballistic missile	Eastern Theater Command	Low	Based on comparisons to other units that have similar weapon systems and likely fall under the theater command system.
617th Brigade	Short-range ballistic missile	Eastern Theater Command	High	Referred to as “a certain Eastern Theater Command Rocket Force Unit.”
Base 62		Southern Theater Command	Medium	Source describes the unit as accelerating the merging into the theater joint operations command arrangement.
623rd Brigade	LACM	Southern Theater Command	High	Referred to as “a certain Southern Theater Command Rocket Force Brigade.”
624th Brigade	Medium-range ballistic missile	Southern Theater Command	Medium	Source states the Southern Theater Command partially oversees unit training.
635th Brigade	LACM	Southern Theater Command	High	Referred to as “a certain Southern Theater Command Rocket Force Unit.”
636th Brigade	Short-range ballistic missile	Southern Theater Command	Low	Based on comparisons to other units that have similar weapon systems and likely fall under the theater command system.
Base 64		Western Theater Command	Medium	Source states “the Rocket Force base also quickened the pace of merging into the theater command’s joint operations system.”
Base 65		Northern Theater Command	Low	Source states this unit helps to train theater staff.
Base 66		Central Theater Command	High	Source states the base merged with the theater command system.
664th Brigade	Intercontinental ballistic missile/ intermediate-range ballistic missile	Central Theater Command	Low	The Central Theater Command WeChat account has posted about this unit.
665th Brigade	Intermediate-range ballistic missile	Central Theater Command	High	Source states the brigade “joined the theater command system last year.”

Table 7-4. Theater associations of PLARF units

Unit	Missile Type	Assessed Theater Association	Confidence	Source	Rationale	Source 2	
Base 61		Eastern Theater Command	Medium	Yuan Qiang 袁强 et al, “东部战区首届联战先锋”主题演讲走进战区空军、火箭军部队” [The first “Pioneer of Joint Warfare” key speech in the eastern theater], WeChat, November 23, 2018, https://mp.weixin.qq.com/s/1SC5GHxx4egEpxv2XKheFQ .	Theater WeChat	Wang Jianjun 王建军 and Wang Cheng 王程, “四级联动、弹幕全开!火箭军某基地大招来袭!” [“Four-level link, barrage opened! A certain rocket army base is attacked!], WeChat, June 25, 2020, https://mp.weixin.qq.com/s/z5IDz7WcKNaxL5XopnR3CYg .	Theater WeChat
611th Brigade	Medium-range ballistic missile						
612th Brigade	Medium-range ballistic missile	Eastern Theater Command - selective	Low - only certain circumstances	An Tianbo 安天波 et al, “有我在, 请放心!” 东部战区火箭军部队雷霆出击抗洪魔” [“I’m here, please no need to worry!” The rocket army of the Eastern Theater Command thundered to fight against the flood], WeChat, June 26, 2017, https://mp.weixin.qq.com/s/WRSof95FOrdZFLGllAvA .	Theater WeChat		
613th Brigade	Short-range ballistic missile	Eastern Theater Command	Low				
614th Brigade	Short-range ballistic missile	Eastern Theater Command	Low				
615th Brigade	Short-range ballistic missile	Eastern Theater Command	Low				
616th Brigade	Short-range ballistic missile	Eastern Theater Command	Low				
617th Brigade	Short-range ballistic missile	Eastern Theater Command	High	Shao Jianguo 邵建国, Wu Xiande 吴先德, and Yao Wang 姚旺, “最热烈的欢迎场面来啦! 东部战区各部队受阅官兵集体出镜(附视频)” [The warm welcome scene arrived! The troops in the eastern theater are photographed], WeChat, October 6, 2019, https://mp.weixin.qq.com/s/KJKNFqk2yI4eUZkY41nlg .	Referred to as “a certain Eastern Theater Command Rocket Force Unit.”		

Table 7-5. Base 61 references used to determine PLARF unit theater associations

Unit	Missile Type	Assessed Theater Association	Confidence	Source	Rationale	Source 2
Base 62		Southern Theater Command	Medium	Li Zhenhua, "Rocket Force Base Sets Up First 'Operations Cluster Command Post' in Multi-Brigade Drill," 火箭兵报 [Rocket Force News], November 25, 2017.	Source describes the unit as accelerating the merging into the theater joint operations command arrangement.	
621st Brigade	Medium-range ballistic missile					
622nd Brigade	Intercontinental ballistic missile					
623rd Brigade	LACM	Southern Theater Command	High	Sun Zhiyuan 孙志远 and Han Lulu 韩露露, "南部战区火箭军某旅: 十项举措持续写全军备战标兵单位'新荣光'" [A brigade of the rocket army in the southern theater: Ten measures continue to write a new glory for the 'Army Preparation Model Unit'], WeChat, January 7, 2019, https://mp.weixin.qq.com/s/mpbiqOb3GWMQwUBqVtHL7g (page discontinued).	Referred to as "a certain Southern Theater Command Rocket Force Brigade."	
624th Brigade	Medium-range ballistic missile	Southern Theater Command	Medium	Xiao Hang, "Rocket Force Brigade Grapples with Reform, Training Issues," 火箭兵报 [Rocket Force News], February 25, 2017.	Source states the Southern Theater Command partially oversees unit training.	
625th Brigade	Intermediate-range ballistic missile					
626th Brigade	Medium-range ballistic missile/intermediate-range ballistic missile					
627th Brigade	Medium-range ballistic missile					
627th Brigade	Medium-range ballistic missile					

Table 7-6. Base 62 references used to determine PLARF unit theater associations

Unit	Missile Type	Assessed Theater Association	Confidence	Source	Rationale	Source 2
Base 63						
631st Brigade	Intercontinental ballistic missile					
632nd Brigade	Intercontinental ballistic missile					
633rd Brigade	Intercontinental ballistic missile					
634th Brigade	Intercontinental ballistic missile					
635th Brigade	LACM	Southern Theater Command	High	Zhai Wenchuan 翟文传, Zhao Yilin 赵艺林, and Zheng Chi 郑驰, “若有战、召必回！这支火箭军部队的老兵退役仪式直抵人心。” [If there is a war, it will be recalled! The retirement ceremony of the veterans of the rocket-army unit has reached the hearts of the people], WeChat, December 2, 2019, https://mp.weixin.qq.com/s/p4ODQ9aRNTqx2sSTf4NiNA .	Referred to as “a certain Southern Theater Command Rocket Force Unit.”	
636th Brigade	Short-range ballistic missile	Southern Theater Command	Low			

Table 7-7. C Base 63 references used to determine PLARF unit theater associations

Unit	Missile Type	Assessed Theater Association	Confidence	Source	Rationale	Source 2
Base 64		Western Theater Command	Medium	Hu Mingxin, "PLARF Base Command, Staff Organ Hones Solid Command Skills," 火箭兵报 [Rocket Force News], January 17, 2018.	Source states "the Rocket Force base also quickened the pace of merging into the theater command's joint operations system."	
641st Brigade	Intercontinental ballistic missile					
642nd Brigade	Intercontinental ballistic missile					
643rd Brigade	Intercontinental ballistic missile					
644th Brigade	Unknown					
645th Brigade	Unknown					
646th Brigade	Medium-range ballistic missile					
647th Brigade	Unknown					

Table 7-8. D Base 64 references used to determine PLARF unit theater associations

Unit	Missile Type	Assessed Theater Association	Confidence	Source	Rationale	Source 2	
Base 65		Northern Theater Command	Low	Zhang Fan, "PLA Rocket Force Base Enhances Fire Power Calculation Capability, Operations Data Application," 火箭兵报 [Rocket Force News], September 20, 2017.	Source states this unit helps to train theater staff.	Kang Zizhan 康子湛, "以笔作枪, 写尽军旅, 最美兵记者" 一直在路上!" [Using a pen as a gun and writing all about the military, the most beautiful "soldier reporter" has been on the road!], Sina Military, November 8, 2018, http://mil.news.sina.com.cn/2018-11-09/doc-ilmnutuea8385496.shtml .	Certain units are identified as "a certain Northern Theater Command Rocket Force Unit."
651st Brigade	Medium-range ballistic missile						
652nd Brigade	Intercontinental ballistic missile						
653rd Brigade	Medium-range ballistic missile						
654th Brigade	Intermediate-range ballistic missile						
655th Brigade	Intercontinental ballistic missile						

Table 7-9 Base 65, References used to determine PLARF unit theater associations

Unit	Missile Type	Assessed Theater Association	Confidence	Source	Rationale	Source 2
Base 66		Central Theater Command	High	Shi Yijie and Feng Jinyuan, "PLA Rocket Force Base Intensely Focuses on Combat-Realistic Training After 18th Party Congress," 火箭兵报 [Rocket Force News], September 6, 2017.	Source states the base merged with the theater command system.	Shi Yijie and Feng Jinyuan, "Rocket Force Base Makes Efforts to Explore Standardization of Joint Operations Process," 火箭兵报 [Rocket Force News], April 14, 2016.
661st Brigade	Intercontinental ballistic missile					
662nd Brigade	Intercontinental ballistic missile					
663rd Brigade	Intercontinental ballistic missile					
664th Brigade	Intercontinental ballistic missile/ Intermediate-range ballistic missile	Central Theater Command	Low	Chen Shifeng 陈世锋 et al., "特情不断, 导弹发射险象环生" [The special situations do not stop, the missile launch is dangerous], WeChat, October 11, 2020, https://mp.weixin.qq.com/s/9w7vaWbikADtalvWTuirnw .	The Central Theater Command WeChat account has posted about this unit.	
665th Brigade	Unknown					
666th Brigade	Intermediate-range ballistic missile	Central Theater Command	High	Yu Yingjie, Feng Jinyuan, and Chen Haijun, "Brigade's War-Realistic Exercise Forges East Wind Special Delivery Strategic Iron Fist," 火箭兵报 [Rocket Force News], September 27, 2017.	Source states the brigade "joined the theater command system last year."	

Table 7-10 Base 66. References used to determine PLARF unit theater associations

At least some PLARF officers are permanently assigned to theater commands in command or staff assignments. Having personnel skilled in planning and executing PLARF operations is crucial in ensuring theater joint operations incorporate PLARF forces optimally. In addition to the highly visible PLARF general officers serving in joint theater command billets, like Southern Theater Command Deputy Chief of Staff Tan Jianming (谈建明) and Eastern Theater Command Deputy Chief of Staff Deng Yuen (邓玉恩), PLARF officers fill some less-visible positions within the theater command.²⁹ In television footage of Xi Jinping’s visit to the Southern Theater Command headquarters in October 2018, most of the senior headquarters staff is visible, and the staff roughly breaks down by service (as depicted in figure 7-3).³⁰

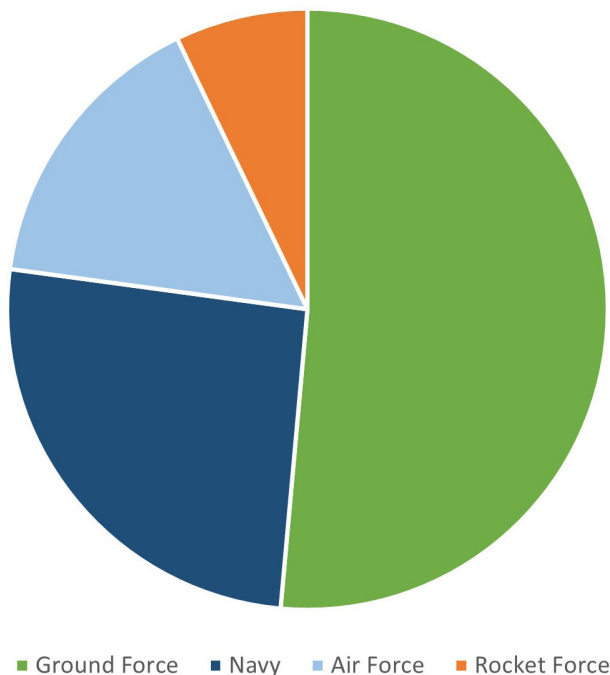


Figure 7-3. Jointness of the Southern Theater Command

Although this allocation of service personnel to theater command positions may seem army-centric, the percentages are roughly commensurate with total PLA personnel numbers by service. The allocation includes five PLARF personnel making up 7 percent of officers present (PLARF personnel compose roughly 5 percent of the total People’s Liberation Army).³¹

29. Roderick Lee, “Integrating the PLA Rocket Force into Conventional Theater Operations,” *China Brief* 20, no. 14 (August 14, 2020), <https://jamestown.org/program/integrating-the-pla-rocket-force-into-conventional-theater-operations/>; and CCTV-7, 军事报道 20200725 [Military report 20200725] (Beijing: CCTV-7, 2020), CCTV-7 video, <https://tv.cctv.com/2020/07/25/VIDEmp9DX9cj9u23tVYyi6Ar200725.shtml>.

30. CCTV-7, 军事报道 20181016 [Military report 20181016] (Beijing: CCTV-7, 2018), CCTV-7 video, <https://tv.cctv.com/2018/10/16/VIDEy3WrkiLCbgXPQzdEdoGG181016.shtml>.

31. Anthony H. Cordesman and Joseph Kendall, *Chinese Strategy and Military Modernization in 2016: A Comparative Analysis* (Washington, DC: Center for Strategic and International Studies, 2016), 214.

PLA Rocket Force's Nonwar Military Activities

Another way of accomplishing military objectives is through endeavors the People's Liberation Army calls "nonwar military activities."³² These activities entail the nonviolent or "limited-violence" employment of military forces to achieve a political goal.³³ Activities may include disaster relief, the provision of security for overseas interests, peacekeeping missions, and security assistance.

The PLA Rocket Force's observable, nonwar military activities in recent years have been limited to domestic disaster relief. In the summer of 2020, elements of multiple PLARF units helped support flood management efforts.³⁴ Other PLA press reporting suggests the PLA Rocket Force can also support nonwar military activities by providing engineering support.³⁵ When compared to the PLA Ground Force's participation in UN peacekeeping operations, the PLA Navy's counterpiracy task group, and the PLA Air Force's involvement in deploying personnel and resources overseas, the PLA Rocket Force's role in nonwar military activities is virtually nonexistent—especially outside the People's Republic of China.

Precedent exists, however, for the PLA Rocket Force playing a major role in such activities—namely, providing military assistance to Saudi Arabia. According to a book titled *Desert Warrior* written by Khaled bin Sultan, a former Saudi deputy minister of defense and member of the House of Saud, the People's Republic of China and Saudi Arabia reached an initial agreement for the former to provide several DF-3 nuclear-capable ballistic missiles to the latter in December 1986.³⁶ The People's Liberation Army would eventually give the project the code name "Golden Wheel Engineering Company" (金轮工程公司).³⁷ Following a series of Saudi delegation visits to China for follow-on negotiations, China delivered the missiles to Saudi Arabia in March 1988.³⁸ In addition to the missiles, the Second Artillery Corps sent personnel to provide technical support and to help operate the missiles.³⁹ These personnel were present in Saudi Arabia during the 1990–91 Persian Gulf War, and the Golden Wheel Engineering Company remained in place as recently as 2016.⁴⁰

Sultan's account states from the Saudi perspective, this nonwar military activity paved the way for mutual political recognition and the establishment of diplomatic relations between China

32. Academy of Military Science, *Science of military strategy*, 258.

33. Xiao Tianliang, *Science of military strategy*, 267.

34. Hu Yue 胡月, "火箭军导弹发射先锋连: 鄱阳湖上抗洪先锋" [Rocket Force missile launch pioneer company: Pioneer of flood fighting on Poyang Lake], 央视新闻客户端 [CCTV News (website)], August 10, 2020, <http://m.news.cctv.com/2020/08/10/ARTIdKfCt8BmE8usmV5DaMiU200810.shtml> (page discontinued).

35. Liang Hui 梁辉, "记者走近火箭军神秘'导弹筑巢人部队'" [The reporter approached a rocket army's mysterious "Missile Nest Personnel" Unit], China Military Online (website), September 20, 2016, http://www.81.cn/jwsj/2016-09/20/content_7268190.htm.

36. Khaled bin Sultan, *Desert Warrior: A Personal View of the Gulf War by the Joint Forces Commander* (New York: HarperCollins, 1995).

37. He Zhengxie 何政颺, "河源人张其彬: 亲手将核导弹送上天" [Zhang Qibin from Heyuan: Personally sent nuclear missiles to the sky], WeChat, December 16, 2014, <https://mp.weixin.qq.com/s/liOMSM6HxfY5sq8o11UFZA>.

38. Sultan, *Desert Warrior*.

39. He Zhengxie, "Zhang Qibin from Heyuan."

40. "原二炮装备部副部长于敏担任金轮工程指挥部" [Gan Min, former Second Artillery Corps Equipment Department deputy director, served as the commander of the Golden Wheel Engineering Command], Economic Report Network, April 25, 2016, <http://cernnet.com/guonei/30.html>.

and Saudi Arabia.⁴¹ Although this claim arises from a single source of unknown veracity, the claim does suggest the PLA Rocket Force may have played a significant role in helping the People's Republic of China achieve a major political victory.

Although the apparent absence of the PLA Rocket Force in present-day, overseas, nonwar military activities might suggest it no longer plays a prominent role, one cannot rule out completely the service's participation. Given the Golden Wheel Engineering Company existed as recently as 2016, over two decades after the People's Liberation Army transferred the DF-3 missiles to Saudi Arabia, PLARF personnel may still be operating there. The presence of Royal Saudi Strategic Missile Force personnel during recent PLA delegation visits in 2017 and 2019 supports this possibility.⁴² Furthermore, limited but definitive evidence indicates the PLA Rocket Force deployed personnel abroad as recently as between 2010 and 2015.⁴³

Implications and Conclusion

Though the PLA Rocket Force no longer has a monopoly on certain missions, some trends indicate greater specialization of the service's capabilities and its integration with the larger PLA C2 structure. These trends point toward the PLA Rocket Force becoming a more important member of the PLA's joint force, in spite of the loss in the service's proportion of the PLA's conventional and nuclear strike capabilities.

The PLA's adoption of concepts like system-of-systems confrontation (体系对抗) emphasizes the need for various systems to interact in a unified manner to overcome adversaries' systems-of-systems. Similarly, the concept of system destruction (体系破击) deemphasizes attrition of strength (力量损失) and emphasizes the use of limited forces to destroy key nodes. The trends indicating the PLA Rocket Force is becoming more specialized and integrated suggest the service should not worry about its relative loss in standing. On the other hand, interservice rivalries persist in nearly every military, and services always vie with each other for limited resources, although no direct evidence suggests the PLA Rocket Force views its comparative loss in stature as a bureaucratic threat.

Indeed, the reality could incorporate elements of both perspectives. The PLA Rocket Force now seems to be more integrated into a larger "Team People's Liberation Army," though the service is facing greater pressure to contest for resources. The implication of greater integration is clear. A joint and integrated People's Liberation Army with a range of nuclear and conventional strike options is clearly a more lethal organization. But the potential for internal pressures within the PLA Rocket Force to justify additional resources may lead to suboptimal decisions about warfighting. For example, the PLA Rocket Force could advocate for excessive investment

41. Sultan, *Desert Warrior*.

42. "ينصلى الملك عبدالعزيز في وقتل يدهغدا يلو ومس" [His highness the crown prince meets with the Chinese defense minister], Saudi Press Agency (website), March 26, 2019, <https://www.spa.gov.sa/1904236?lang=ar&newsid=1904236>.

43. Zi Xiaohan 紫小涵, "2015北京海淀区清河中学中招加分优先录取名单" [2015 Beijing Haidian District Qinghe Middle School enrollment additional points priority admission list], Zhongkao (website), May 15, 2015, <http://bj.zhongkao.com/e/20150515/5555f13f4ff91.shtml>.

in ground-based, conventional ballistic missiles beyond the amount the People's Liberation Army needs to retain the service's relative share of precision-strike capabilities.

Given the rapid expansion of the People's Republic of China's strategic space and the emergence of PLAN and PLAAF, conventional, precision-strike options, the PLA Rocket Force may choose to reemphasize its nuclear mission and leave conventional strike missions to the other services. Although such a choice seems unlikely to an outside observer, finite resource factors could create such pressures. A more likely alternative is the PLA Rocket Force will push to acquire longer-range and more survivable, land-based, conventional missile systems. Although this approach has worked thus far in maintaining PLARF uniqueness relative to the other services' conventional strike capabilities, the PLA Rocket Force can only push conventional system ranges so far before they become intercontinental missiles. Such an occurrence could, in turn, create a host of nuclear escalation concerns.

A final factor worth considering is the great potential for future PLARF nonwar military activities abroad. The precedent exists of the People's Republic of China transferring PLARF-operated systems to foreign countries and deploying the PLA Rocket Force abroad to help those missiles. Although the Golden Wheel Engineering Command in Saudi Arabia has limited implications for US policy, PLARF-centric, nonwar military activities could still have serious implications. With the precedent set, the PLA Rocket Force transferring conventional or dual-use ballistic missile systems to another country and helping it to operate those systems is not unimaginable.

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- He, Zhengxie. 何政颢, “河源人张其彬: 亲手将核导弹送上天” [Zhang Qibin from Heyuan: Personally sent nuclear missiles to the sky]. WeChat. December 16, 2014. <https://mp.weixin.qq.com/s/1iOMSM6HxfY5sq8o11UFZA>.
- “ي ن ي ص ل ا ع ا ف د ل ا ر ي ز و ي ق ت ل ي د ع ل ا ي ل و و م س” [His highness the crown prince meets with the Chinese defense minister]. Saudi Press Agency (website). March 26, 2019. <https://www.spa.gov.sa/1904236?lang=ar&newsid=1904236>.
- Hu, Yue 胡月. “火箭军导弹发射先锋连: 鄱阳湖上抗洪先锋” [Rocket Force missile launch pioneer company: Pioneer of flood fighting on Poyang Lake], 央视新闻客户端 [CCTV News (website)], August 10, 2020, <http://m.news.cctv.com/2020/08/10/ARTIdKfCt8BmE8usmV5DaMiU200810.shtml> (page discontinued).
- Lee, Roderick. “China’s Air Force Might Be Back in the Nuclear Business.” *Diplomat* (website), September 9, 2020. <https://thediplomat.com/2020/09/chinas-air-force-might-be-back-in-the-nuclear-business/>.
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Chinese Expeditionary Operations: Is There a Role for Joint Logistics?

Joel Wuthnow

Introduction

China's People's Liberation Army (PLA) has improved its ability to conduct joint operations within China and the region, but it lacks a similar ability for overseas operations.¹ One area where the disparities are stark is logistics, which encompasses both transportation and the sustainment of troops. Domestically, decades of reforms have led to a mature logistics structure attuned to supporting joint combat operations. Overseas logistical support, by contrast, remains a makeshift affair based on the individual services. This approach can support limited operations such as peacekeeping and counterpiracy, but the approach falls short of the demand to extend China's overseas combat power.

Most relevant discussions of China's future overseas logistics approaches focus on the country's issues with basing and access as well as civil-military integration. The Department of Defense addresses overseas logistics in its 2020 annual report on China's military power, for example, which includes an extensive discussion on potential facilities.² But this assessment does not consider joint logistics. Likewise, recent academic research by the China Maritime Studies Institute at the US Navy War College considers China's current base in Djibouti and its potential base in Pakistan.³ But both analyses center on the Chinese navy. For its part, Beijing has emphasized the need for additional support facilities based on agreements with friendly countries and support from Chinese state-owned enterprises.⁴ But even this discussion tends to assume the People's Liberation Army's services will continue to handle logistics. Though sensible from the perspective of current requirements, this arrangement nevertheless contrasts with China's move toward a joint command structure and the country's integration of logistics forces at home. The status quo also diverges from logistical practice

1. Mark R. Cozad, "Toward a More Joint, Combat Ready PLA?" in *Chairman Xi Remakes the PLA: Assessing Chinese Military Reforms*, ed. Phillip C. Saunders et al. (Washington, DC: National Defense University [NDU] Press, 2019), 203–26.

2. Office of the Secretary of Defense (OSD), *Military and Security Developments Involving the People's Republic of China 2020* (Washington, DC: OSD, 2020), 128–30.

3. Peter A. Dutton, Isaac B. Kardon, and Conor M. Kennedy, *Djibouti: China's First Overseas Strategic Strongpoint*, China Maritime Report no. 6 (Newport, RI: China Maritime Studies Institute [CMSI], 2020); and Isaac B. Kardon, Conor M. Kennedy, and Peter A. Dutton, *Gwadar: China's Potential Strategic Strongpoint in Pakistan*, China Maritime Report no. 7 (Newport, RI: CMSI, 2020).

4. Xiao Tianliang, 肖天亮, 战略学 [Science of military strategy] (Beijing: National Defense University Press, 2015), 303–4.

in the United States. American doctrine considers logistics a key Joint Force function that provides commanders “the means to enable freedom of action and endurance and to extend operational reach.”⁵ If the People’s Liberation Army intends to conduct joint operations beyond the first island chain, it will eventually have to shift its approach away from the services and potentially toward the Joint Logistic Support Force (JLSF).

What role might the Joint Logistic Support Force play in overseas operations? Established in late 2016 as part of the Xi Jinping-era reforms, the Joint Logistic Support Force is the primary agent for joint logistics for domestic and regional contingencies.⁶ Chinese sources adopt an expansive definition of “joint logistics,” covering both common-use materials, such as food, clothing, and some types of ammunition, and common-use services, such as medical services, transportation, and construction.⁷ The Joint Logistic Support Force consolidates many of these functions, though service-specific supplies and some nominally joint functions, such as transportation, continue to be managed by the services.⁸ Despite a growing role at home, the Joint Logistic Support Force has no significant overseas responsibilities at present. But by 2030, the force could take the lead in delivering and sustaining troops. Unlike the services, the Joint Logistic Support Force is an independent force (部队), a status that justifies both a force-building and an operational portfolio. The force has also amassed experience through transregional exercises and other training, which it could draw on in a global context.

How the Joint Logistic Support Force evolves will depend on how the strategic environment and China’s military strategy develop over the next decade. This chapter starts by reviewing the current bifurcation in PLA logistics between a joint structure at home and a service-led approach abroad. The chapter then uses two scenarios—a regionally focused People’s Liberation Army and a global, expeditionary People’s Liberation Army—to assess the overseas roles the Joint Logistic Support Force could play by 2030. In the first scenario, the force would continue to play only a marginal role abroad. In the second, the People’s Liberation Army would shift to a model more like the US military, with the Joint Logistic Support Force appointed as lead coordinator for strategic transportation. In the latter case, force would have a larger overseas footprint. The next section discusses obstacles the Joint Logistic Support Force will face if it assumes these roles, including bureaucratic resistance, the need for new organizations, human capital shortcomings, and operational risks. The conclusion addresses implications for the United States and identifies indicators for measuring PLA progress.

Logistics of the People’s Liberation Army in the Early 2020s

Assessing how China’s logistics system could evolve to support future expeditionary operations requires an understanding of the current organization of the system. Logistical developments at

5. Joint Chiefs of Staff, *Joint Logistics*, Joint Publication 4-0 (Washington, DC: Joint Chiefs of Staff, February 4, 2019), ix.

6. Joel Wuthnow and Phillip C. Saunders, *Chinese Military Reforms in the Age of Xi Jinping: Drivers, Challenges, and Implications*, China Strategic Perspectives no. 10 (Washington, DC: Institute for National Strategic Studies, NDU Press, 2017).

7. Susan M. Puska, “Taming the Hydra: Trends in China’s Military Logistics since 2000,” in *The PLA at Home and Abroad: Assessing the Operational Capabilities of China’s Military*, ed. Roy Kamphausen, David Lai, and Andrew Scobell (Carlisle, PA: Strategic Studies Institute, US Army War College Press, 2010), 562–67.

8. Joel Wuthnow, “A New Era for Chinese Military Logistics,” *Asian Security* 17, issue 3 (2021): 281–84.

home and abroad have followed different trajectories. Within China, the People's Liberation Army has built a comprehensive joint logistics structure to assist in domestic emergencies and provide wartime support to joint commanders.⁹ Farther afield, China relies on a patchwork of service-centric logistical capabilities and external support, assigning almost no role to the Joint Logistic Support Force. Thus, the trajectory of China's future overseas operations will depend on whether the country will merge these differing domestic and foreign practices, whether China will extend its joint logistics capability far beyond its borders, and how it would achieve such a shift.

A Stronger “Home Game”

The People's Liberation Army's joint logistics structure can be traced to both operational and financial concerns. Since 1993, Chinese military strategy has focused on “integrated joint operations” at home and in the region—a focus that has created new logistical requirements.¹⁰ Complex domestic missions such as humanitarian assistance and disaster relief have required multiple PLA services and branches to work together at a scale and tempo that justifies consolidated control over logistics operations.¹¹ More importantly, sustaining joint combat operations against regional adversaries such as Taiwan, Japan, Vietnam, India, and the United States would require a cohesive logistics apparatus that supported leaders in China's five theater commands as well as naval and air force operations out to the first island chain. In addition, financial rationale supports this consolidation: During and after the Cold War, the services maintained their own logistics departments, which led to severe duplication of effort.¹²

Given these motives, China's logistical reforms have focused on the centralization of authority and the integration of resources. Specifically, after the People's Liberation Army issued its inaugural joint campaign guidelines in 1999, the General Logistics Department established joint logistics departments in each military region to handle general purpose supplies, such as petroleum, oil, and lubricants; food supplies; and certain spare parts. Meanwhile, the services continued to operate their own supply chains for specialized items and maintained responsibility for China's airlift and sealift capabilities. (In 2004, the People's Liberation Army also established a pilot program in the Jinan military region to eliminate logistics departments within the services, but this program ultimately was not adopted elsewhere.) Both joint and service-based logistics forces were also integral to transregional training exercises that focused on how to move large numbers of troops across China and sustain them in distant field locations.¹³

A pivotal moment came with the creation of the Joint Logistic Support Force in 2016. The Joint Logistic Support Force is primarily responsible for “integrating strategic and campaign forces focusing

9. Wuthnow, “A New Era.”

10. M. Taylor Fravel, *Active Defense: China's Military Strategy since 1949* (Princeton, NJ: Princeton University Press, 2019).

11. Susan M. Puska, “SARS 2002–2003: A Case Study in Crisis Management,” in *Chinese National Security: Decisionmaking under Stress*, ed. Andrew Scobell and Larry Wortzel (Carlisle, PA: Strategic Studies Institute, US Army War College Press, 2005), 85–134.

12. Puska, “Taming the Hydra,” 553–635; and LeighAnn Luce and Erin Richter, “Handling Logistics in a Reformed PLA: The Long March toward Joint Logistics,” in *Chairman Xi Remakes*, 257–92.

13. Dennis J. Blasko, “The Biggest Loser in Chinese Military Reforms: The PLA Army,” in *Chairman Xi Remakes*, 367–70.

on general purpose support tasks” and providing logistical support to the theaters.¹⁴ Organized on a hub-and-spoke model, the Joint Logistic Support Force draws from units previously subordinate to the General Logistics Department (figure 8-1 depicts the JLSF’s organizational structure) and the military regions.¹⁵ A central base in Wuhan directs five Joint Logistic Support Centers, each aligned with a theater. Figure 8-2 depicts the internal structure of the Joint Logistics Support Center.¹⁶ The centers, in turn, oversee supply depots and mobile units for transporting heavy equipment and carrying out task-oriented functions, such as medical support and resupply.¹⁷ The key advance was centralization: The JLSF commander can direct movements between theaters, which could prove to be essential in a major contingency. Nevertheless, the Joint Logistic Support Force must coordinate with logistics departments under each theater’s service component command as well as civilian, state-owned enterprises. The force must also leverage transportation assets owned by the services, such as Ilyushin Il-76s and Xi’an Y-20s belonging to the PLA Air Force (PLAAF).¹⁸

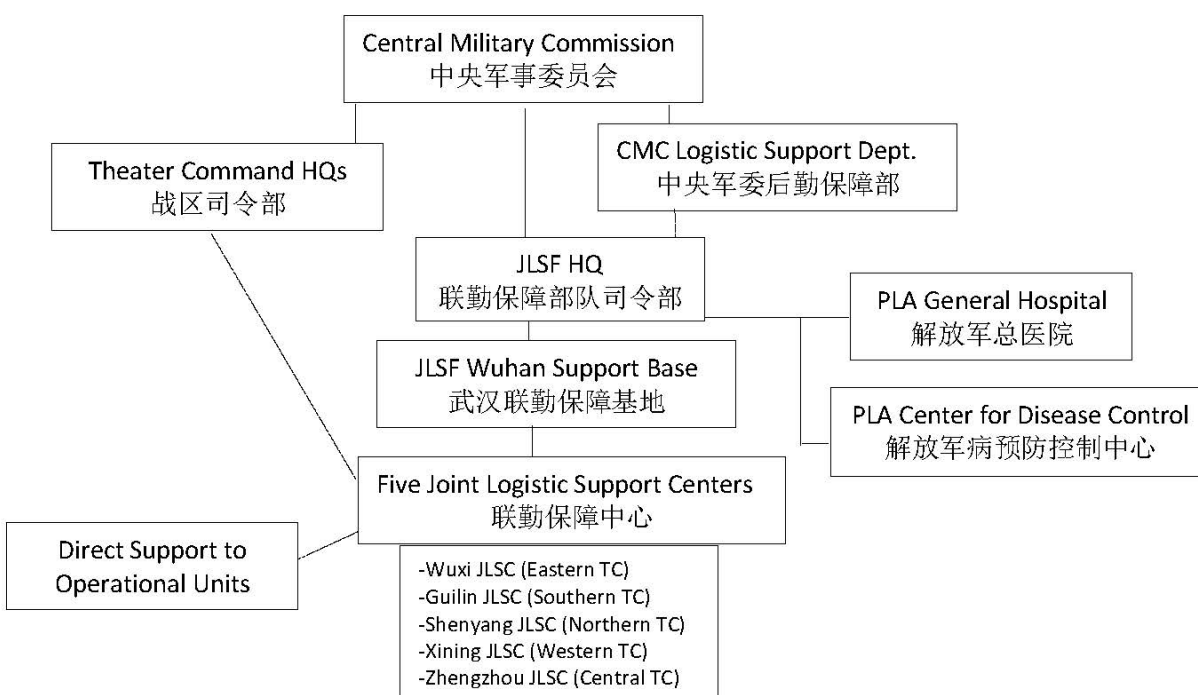


Figure 8-1. Organization chart of the Joint Logistic Support Force

Since 2016, the Joint Logistic Support Force has participated in several joint exercises that focused on supporting cross-theater operations.¹⁹ In January 2020, the Joint Logistic Support Force made its operational debut, leading the People’s Liberation Army’s response to the coronavirus

14. State Council Information Office of the People’s Republic of China (PRC), “China’s National Defense in the New Era” (white paper, State Council Information Office of the PRC, Beijing, China, July 2019).

15. Luce and Richter, “Handling Logistics.”

16. Luce and Richter, “Handling Logistics”; and Wuthnow, “A New Era.”

17. Kevin McCauley, *China’s Logistics Support to Expeditionary Operations* (testimony, *China’s Military Reforms and Modernization: Implications for the United States, Before the US-China Economic and Security Review Commission*, February 20, 2020), 26–27; and Luce and Richter, “Handling Logistics,” 276.

18. Wuthnow, “A New Era.”

19. OSD, *Military and Security Developments 2020*, 66–67.

disease 2019 (COVID-19) outbreak in Wuhan. In this instance, the Joint Logistic Support Force constructed a makeshift hospital, arranged transportation for 4,000 military medics, and handled the delivery of critical medical supplies.²⁰ Although not reflective of the scale and complexity of wartime demands, these operations highlighted several aspects of China’s improving logistical capabilities, including the JLSF commander’s ability to harness scarce resources from across the country and ensure their rapid delivery to the front lines; the use of information technology to process requests and monitor shipments; and increased civil–military cooperation, such as the role played by military representatives in civilian transportation agencies.²¹ In sum, the case demonstrated a maturing joint logistics system at home and likely provided lessons for further developments.

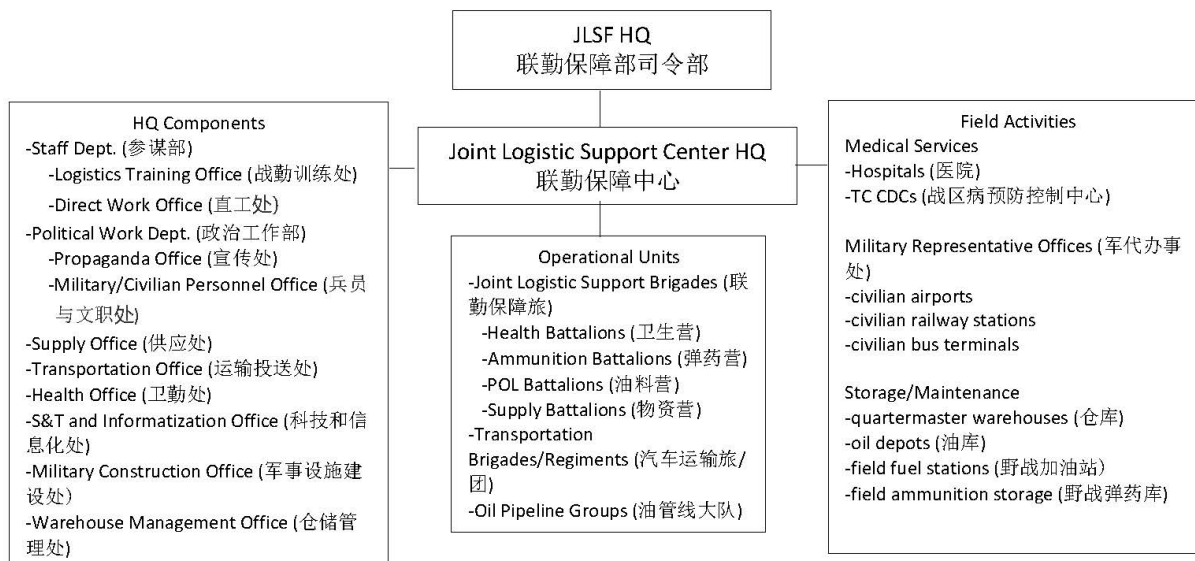


Figure 8-2. Organization chart of the Joint Logistic Support Centers

A Weaker “Away Game”

By contrast, China has not fully developed its logistical support capabilities beyond the first island chain. The current approach for supporting overseas operations consists of three models that are usually employed in combination.²² The first is a “bring it with you” model, such as Chinese peacekeeping forces who bring equipment and supplies, including organic support personnel, with them to Africa or the Middle East and naval counterpiracy task forces that incorporate replenishment ships and tankers.²³ The People’s Liberation Army has improved this model, but the constraints—including the limited capacity of PLA cargo aircraft and replenishment ships—have required the organization to use other options to extend the range and duration of overseas missions. Modern

20. Joel Wuthnow, “Responding to the Epidemic in Wuhan: Insights into Chinese Military Logistics,” *China Brief* 20, no. 7 (April 2020): 6–11, <https://jamestown.org/program/responding-to-the-epidemic-in-wuhan-insights-into-chinese-military-logistics/>.

21. Wuthnow, “A New Era,” 7–9.

22. Joel Wuthnow, Phillip C. Saunders, and Ian Burns McCaslin, “PLA Joint Operations in the Far Seas” (working paper, 2019 CMSI Conference: Going Global?, Newport, Rhode Island, May 7, 2019).

23. Chad Peltier, *China’s Logistics Capabilities for Expeditionary Operations* (Washington, DC: US-China Economic and Security Review Commission, 2020), 49.

water purification systems on naval ships are one example of an upgrade. Moreover, as of 2020, China had two Type 901 combat support ships, eight Type 903 replenishment ships, one Type 905 fleet oiler, 20 Il-76 airlifters, and at least eight Y-20 airlifters.²⁴

A second model that has several variations is reliance on external actors. The UN, for instance, provides central maintenance services and stockpiles for peacekeepers. Chinese forces could use external assets or procure them from the local economy once the forces have exhausted their organic resources.²⁵ Naval task forces routinely berth at foreign ports (some of which are built, owned, and operated by Chinese state-owned enterprises) for rest and resupply. The task forces also rely on services supplied by foreign and Chinese companies.²⁶ In a recent innovation, the People's Liberation Army has been using Chinese civilian ships owned by shipping firm China Ocean Shipping Company, Limited to conduct underway replenishment for naval vessels.²⁷ This approach is relatively flexible and inexpensive, but third-party procurement can only supply a limited amount of goods and services. Foreign civilian infrastructure may also be vulnerable to attack, and contracting disputes or corruption involving foreign partners may arise.

A third, incipient model is building a network of military bases and facilities overseas. China's first foreign base, located in Djibouti, hosts medical, supply, and maintenance personnel who can support forward-deployed PLA units and includes storage facilities for ammunition and other supplies.²⁸ The base, which supports the navy, is well situated to support Chinese peacekeepers.²⁹ In the future, China may open similar facilities in countries such as Pakistan and Cambodia. Moreover, the Office of the Secretary of Defense states China has "likely considered" building facilities in 12 countries in South and Southeast Asia, the Middle East, and Africa.³⁰ In comparison with civilian facilities, these bases would offer better protection from terrorism—though not from state adversaries due to the absence of stronger defenses. But China would incur the costs of managing overseas bases, and they would be subject to host-country politics.³¹

In contrast to the joint logistics system within China, the three overseas models focus on the individual services. (One exception is cooperation in transportation; for instance, UN peacekeepers are occasionally flown to their mission location on PLAAF transport aircraft.) Indeed, the Joint Logistic Support Force currently plays no international role other than dispatching medical personnel to UN peacekeeping missions and other small-scale deployments, such as competing in international

24. James Hackett, ed., *The Military Balance 2020* (London: International Institute for Strategic Studies, 2020), 262–65; and Andrew S. Erickson and Austin M. Strange, *No Substitute for Experience: Chinese Antipiracy Operations in the Gulf of Aden*, CMSI Red Book no. 10 (Newport, RI: CMSI, 2011), 122–3.

25. Don Leslie, *Operational Logistical Support of UN Peacekeeping Missions: Intermediate Logistics Course* (Williamsburg, VA: Peace Operations Training Institute, 2011), 50–73.

26. Isaac B. Kardon, "China's Overseas Base, Places, and Far Seas Logistics," in *The PLA beyond Borders: Chinese Military Operations in Regional and Global Context*, ed. Joel Wuthnow et al. (Washington, DC: NDU Press, 2021), 73–107.

27. Peltier, *China's Logistics Capabilities*, 7.

28. Dutton, Kardon, and Kennedy, *Djibouti*, 35–36; and Conor M. Kennedy, "Strategic Strong Points and Chinese Naval Strategy," *China Brief* 19, no. 6 (March 2019), <https://jamestown.org/program/strategic-strong-points-and-chinese-naval-strategy/>.

29. Dutton, Kardon, and Kennedy, *Djibouti*, 35–36; Kennedy, "Strategic Strong Points"; and Kardon, "China's Overseas Base."

30. Kardon, Kennedy, and Dutton, *Gwadar*; and OSD, *Military and Security Developments 2020*, 129.

31. Christopher D. Yung and Ross Rustici, *"Not an Idea We Have to Shun": Chinese Overseas Basing Requirements in the 21st Century*, China Strategic Perspectives no. 7 (Washington, DC: Institute for National Strategic Studies, NDU Press, 2014), 33–35.

military games in Russia. Personnel of the Joint Logistic Support Force also participated in a medical mission in Djibouti named “Operation Bright Eyes.”³² This bifurcation occurred because, thus far, China has not needed a joint logistics system abroad. Although Hu Jintao famously espoused “new historic missions” that would require the People’s Liberation Army to secure China’s overseas interests, most of these missions have been small and confined to a single service.³³ The People’s Liberation Army has also conducted overseas contingency operations, such as the evacuation of Chinese citizens from Libya in 2011 and Yemen in 2015. But in these cases, Chinese forces were able to improvise solutions without a joint logistics system. (In lesser contingencies, China might not need the People’s Liberation Army at all because the nation could rely on host-country forces and private security companies for support.)³⁴ Bureaucratic politics may also be at play; without a stronger operational rationale for consolidated control, the services can lobby to retain their logistical roles. This is most prominent with the PLA Navy [PLAN], which appears to direct counterpiracy operations, in addition to managing the logistical support facility in Djibouti. Chinese ground forces also manage their own logistics requirements for UN peacekeeping. Thus, an expanded role for the Joint Logistic Support Force would constitute an implicit concession on the part of the People’s Liberation Army’s services, which recent reforms basically removed from the operational business.

Contemplating an Expeditionary Joint Logistic Support Force

By 2030, larger and more complex missions could provide a rationale for joint logistical support of expeditionary operations. Though the Joint Logistic Support Force could evolve in different ways, this section highlights two broad trajectories that depend on how the security environment evolves.³⁵ In the first scenario, domestic and regional contingencies would continue to preoccupy the People’s Liberation Army. Overseas operations would focus on sea-lane protection and military operations other than war (MOOTW). The Joint Logistic Support Force would become an important supporting actor, though the services would retain the lead. In the second scenario, China would have achieved a more secure domestic environment and would have resolved some territorial disputes, allowing the military to conduct more ambitious overseas operations, including joint operations in complex, nontraditional, or combat situations, such as strikes and raids.³⁶ In this second scenario, the Joint Logistic Support Force could become an overarching coordinator for transportation and sustainment, in which case, it would likely deploy more logistics personnel.

32. Wang Weidong and Lin Duo, “Several Chinese Participating Teams to Make Their Debut in IAG 2021,” *PLA Daily* (website), August 9, 2021, http://english.pladaily.com.cn/2021special/2021-08/09/content_10078822.htm; and Peltier, *China’s Logistics Capabilities*, 10.

33. Daniel M. Hartnett, “The ‘New Historic Missions’: Reflections on Hu Jintao’s Military Legacy,” in *Assessing the People’s Liberation Army in the Hu Jintao Era*, ed. Roy Kamphausen, David Lai, and Travis Tanner (Carlisle, PA: Strategic Studies Institute, US Army War College Press, 2014), 36; and Phillip C. Saunders, “PLA Command and Control of Overseas Operations,” in *PLA beyond Borders*, 107–26.

34. Timothy R. Heath, *China’s Pursuit of Overseas Security* (Santa Monica, CA: RAND Corporation, 2018), 23–32.

35. Lonnie Henley, “Whither China? Alternative Military Futures, 2020–2030,” in *The People’s Liberation Army in 2025*, ed. Roy Kamphausen and David Lai (Carlisle, PA: Strategic Studies Institute, US Army War College Press, 2015), 49–50.

36. Wuthnow, Saunders, and McCaslin, “PLA Joint Operations.”

A Regionally Focused Joint Logistic Support Force

The first scenario represents only a modest change from the current situation. Overseas logistics would be handled primarily by the services and third parties, with a few more overseas logistics hubs being opened (under naval management) along key maritime routes. In support of these modest reforms, one group of PLA scholars argues Chinese civilian enterprises should play a key role in an evolving “overseas delivery support system.”³⁷ These civilian partnerships would represent a continuation of the second model of overseas logistical support previously discussed wherein the People’s Liberation Army relies upon external actors for logistical support. Other scholars suggest civilian enterprises should be tied more closely with China’s “strategic strongpoints,” blending civilian support with the third model previously discussed wherein the People’s Liberation Army develops a network of overseas facilities.³⁸ Nevertheless, in either case, the Joint Logistic Support Force would play various niche roles: overseeing the construction of civilian air-support and sea-support forces and directing their use in support of military operations; managing strategic delivery bases within China that serve as hubs for overseas operations; and deploying logisticians and equipment on a small scale. Concentrating on these roles would allow the Joint Logistic Support Force to focus its capabilities and training on domestic and regional contingencies while using extant and near-term capabilities.

Strategic Support Fleets

One role for the Joint Logistic Support Force in this scenario would be managing China’s civilian-support fleets. The 12th Five-Year Plan (2011–15) directed the construction of civilian maritime and aviation support fleets to fill PLA capability gaps and reduce the burden on the military budget.³⁹ These programs were addressed in the 2016 national defense transportation law, which mandated large and medium state-owned enterprises build capabilities and conduct training to support “long-distance and large-scale” defense transportation.⁴⁰ These civilian fleets function similarly to the US Civil Reserve Air Fleet: They are commercial assets the People’s Liberation Army can mobilize for national defense purposes. Several vessel types were integrated into the maritime civilian strategic support fleets, including roll-on, roll-off ships; oil tankers; and even a 50,000-ton

37. Luo Lei et al., “海军远海运输投送能力建设研究” [Research on the construction of naval ocean transportation projection capability], *军事交通学院学报* [*Journal of Military Transportation University*] 22, no. 2 (2020): 7.

38. Lu Xinyuan 吕新远, Qiao Wei 乔伟, and Guo Qiusheng 郭秋生, “新时期陆军运输投送交通保障问题研究” [Research on army delivery projection and transportation support in the new era], *军事交通学院学报* [*Journal of the Military Transportation University*] 20, no. 12 (2018): 14.

39. Conor M. Kennedy, *Civil Transport in PLA Power Projection* (Newport, RI: CMSI, 2019), 7; and Chen Xiangpeng et al., “加强我国战略投送支援舰队建设的思考” [Considerations on strengthening construction of the strategic-delivery support fleet in the new era], *军事交通学院学报* [*Journal of Military Transportation University*] 21, no. 10 (2019): 11.

40. 中华人民共和国国防交通法 [Law of the People’s Republic of China on national defense transportation], Order No. 50 of the President (2016).

semisubmersible transport ship with cargo space equivalent to two football fields.⁴¹ The air fleets include cargo planes and helicopters used for medical rescue.⁴²

Although these assets belong to state-owned enterprises, the Joint Logistic Support Force ensures their construction follows military requirements. The force also organizes training and appears to play an oversight role in the integration of these platforms into military operations. According to one group of PLA academics commenting on command of the civilian air-support fleet, “In peacetime, the regional joint logistics support center and the theater transportation and delivery management department (relevant transportation military representative office) should guide the aircraft fleet, carry out national defense education, military knowledge and laws and regulations, and do a good job in the organization and construction of the fleet.”⁴³ The Guilin Joint Logistic Support Center, which is aligned with the Southern Theater Command, has directed civilian cargo ships to transport fresh water, oil, and food to outposts in the South China Sea and has used a civilian oil tanker to replenish naval vessels.⁴⁴ The center also organized an exercise involving civilian cargo aircraft at Shanghai Pudong International Airport.⁴⁵ Similarly, the Wuxi Joint Logistic Support Center, which is aligned with the Eastern Theater Command, has overseen the construction of semisubmersible ships, and one of the center’s transport detachments or *dadui* (船运大队) has conducted training in damage control, maritime rescue, and oil delivery.⁴⁶

At present, these capabilities are used primarily for operations within the first island chain, including the South China Sea, East China Sea, and Yellow Sea. This usage of the capabilities reflects both the Joint Logistic Support Force’s focus on regional contingencies and its organizational structure, wherein each Joint Logistic Support Center is affiliated with a particular theater. But as the civilian-support fleets expand, their assets could be used to support overseas operations. Addressing an expansion of the maritime support fleet, one JLSF author notes the gap between the PLA Navy’s “long-distance ocean projecting capabilities” and its production targets, providing a rationale for using civilian ships in distant theaters.⁴⁷ Another JLSF author writes civilian aviation

41. Xiong Gang 熊刚, Gao Jie 高洁, and Guo Bin 郭彬, “揭秘新成立的中央军委联勤保障部队” [Demystifying the newly established Central Military Commission Joint Logistic Support Force], *中国青年报* [*China Youth Daily*] (website), January 19, 2017, http://zqb.cyol.com/html/2017-01/19/nw.D110000zgqnb_20170119_2-11.htm; and *PLA Daily*, “我军战损舰船有了海上应急抢修平台” [Our battle-damaged ships have a marine emergency repair platform], Maritime Service Network, April 17, 2017, <https://www.cnss.com.cn/html/currentevents/20170417/267879.html>.

42. China Military Television Network, 无锡联勤保障中心: 军民联合打造陆海空联勤保障新网 [Wuxi Joint Logistic Support Center: Military and civilians jointly build a new land, sea, and air joint logistics support network] (Beijing: China Military Television Network, 2016), JS7TV video, http://www.js7tv.cn/video/201612_74406.html; and OSD, *Military and Security Developments 2020*, 66–67.

43. Hai Jun et al., “航空战略投送支援机队的实战化运用” [Practical application of the Aviation Strategic Projection Support Fleet], *国防交通工程与技术* [*National Defense Transportation, Engineering, and Technology*] 17, no. 6 (2019): 1.

44. Lei Xiang 雷响 and Lin Duo 林铎, “桂林联勤保障中心完善民用运力动员机制” [Guilin Joint Logistics Support Center perfects civilian capacity mobilization system], *PLA Daily*, July 3, 2018, 2; and *PLA Daily*, “桂林联勤保障中心贯彻军民融合发展战略” [Guilin Joint Logistic Support Center implements military-civilian integration development strategy], *The People’s Network*, January 20, 2018, <http://military.people.com.cn/n1/2018/0120/c1011-29776427.html>.

45. Xinhuanet, “桂林联保中心与民航部门联合组织投送演练” [Guilin Joint Logistic Support Center and the Civil Aviation Department jointly organized a delivery drill], *Sina* (website), January 5, 2018, <http://mil.news.sina.com.cn/2018-01-05/doc-ifyqinzs8844825.shtml>.

46. *PLA Daily*, “Our battle-damaged ships”; Kennedy, *Civil Transport*, 17; and China Military Television Network, 无锡联勤保障中心某船运大队组织海上实战化演练 [A Wuxi Joint Logistic Support Center shipping detachment organizes maritime real combat exercise] (Beijing: China Military Television Network, 2020), JS7TV video, http://www.js7tv.cn/video/202003_210386.html.

47. Luo Lei et al., “Research on the construction,” 6.

fleets would be increasingly instrumental for overseas operations because of PLA aircraft shortages and restrictions on permits for military aircraft. (The authors claim civilian aircraft face fewer encumbrances due to provisions of the Chicago Convention on International Civil Aviation.)⁴⁸ Other PLA scholars lobby for expanding the air support fleet to enable peacekeeping, military assistance, and humanitarian assistance.⁴⁹

Strategic Delivery Bases

A related role for the Joint Logistic Support Force concerns the management of strategic delivery bases within China. In Chinese terminology, “strategic delivery” refers to the projection of forces across long distances, whether within China or abroad.⁵⁰ One group of PLA logisticians defines the concept as actions that “integrate all sorts of transportation means to project forces to war zones or areas at risk,” making these actions critical to seizing the “battlefield initiative.”⁵¹ Strategic delivery bases seek to merge civilian and military resources; their distinctive attributes include extensive storage facilities, cargo terminals, loading and unloading equipment, and specialized crews that are able to handle large volumes of cargo.⁵² In 2014, the first base, formally called a “military-civilian fusion strategic projection base,” was established adjacent to the Zhengzhou Xinzheng International Airport.⁵³ Located at the crossroads of multiple domestic air, rail, and highway routes, the new base serves as a storage and transportation hub.⁵⁴ The base’s primary mission is likely to provide rear-area support for the theaters, but it has played a small overseas role by managing the dispatch of some Chinese peacekeepers.⁵⁵

In the scenario in which JLSF expansion is limited, the People’s Liberation Army could use strategic delivery facilities more regularly to support overseas operations. The Joint Logistic Support Force would manage base construction and operations; these activities would include tracking inventories of key supplies, requesting resources from other JLSF sites, procuring resources from civilian firms when supplies have been depleted, handling storage and maintenance, and facilitating the overseas transportation of personnel and materiel by civilian-support fleets (although the services would continue to direct overseas operations using military assets). Even so, the Joint Logistic Support Force could promote more efficient long-term deployments by managing key parts of the supply chain and arranging transportation (for example, by centralizing support functions for peacekeepers) and offer tailored options in the event of contingency operations, such as noncombatant evacuation operations (NEOs).

48. Chen Xiangpeng et al., “Considerations on strengthening construction,” 12.

49. Hai Jun et al., “Practical application,” 2.

50. All-Military Terminology Management Committee 全军军事术语管理委员会, 中国人民解放军军语 [China’s People’s Liberation Army military terminology] (Beijing: Military Science Press, 2011), 58.

51. Zhao Guang 赵光, Qian Xiaoqing 钱晓庆, and Dai Weiwei 戴卫伟, “美军敏捷运输对我军战略投送建设的启示” [US Army agile transportation and its enlightenment to development of our army’s strategic projection capability], 军事交通学院学报 [Journal of Military Transportation University] 21, no. 3 (2019): 6.

52. Chung Chieh and Andrew N. D. Yang, “Crossing the Strait: Recent Trends in PLA ‘Strategic Delivery’ Capabilities,” in *PLA beyond Borders*, 49–71.

53. Kennedy, *Civil Transport*, 28.

54. Kennedy, *Civil Transport*, 28.

55. Hua Xiao 花晓 and Zhao Jie 赵杰, “全国首个军民融合式应急投送保障基地高效运行” [Efficient operation of the country’s first military-civilian integrated emergency delivery support base], *PLA Daily*, October 14, 2016, 7.

Niche Deployers

Finally, within the first (regionally focused) scenario, the Joint Logistic Support Force of 2030 would be based mainly within China, and the services would continue to handle overseas resupply, engineering, maintenance, repair, and contracting services. Playing a supporting role, the Joint Logistic Support Force could dispatch logisticians and other personnel. The force's most obvious role would be in military medicine. Under the 2016 reforms, many of the People's Liberation Army's hospitals and centers for disease control that had previously been under the General Logistics Department as well as military regions were consolidated under the Joint Logistic Support Force. Personnel from these units would deploy to UN peacekeeping missions, as they do today, and take part in epidemic control, as they did during the Ebola outbreak of 2014–16.⁵⁶ These personnel could also support multinational exercises and operations; indeed, one of the few overseas exercises involving JLSF personnel was a 2019 event with Germany that focused on a health crisis at a fictional refugee camp.⁵⁷

Other specialized logistics personnel might also be deployed in small numbers. In the event of a pipeline malfunction or terrorist incident, for instance, JLSF pipeline specialists could be quickly dispatched with heavy equipment to repair damaged pipelines, drawing on experience gained in domestic training exercises.⁵⁸ The Joint Logistic Support Force might also call upon transportation experts in some cases, such as when they need inspection teams to assess the condition of highways or railways. In 2019, for instance, JLSF technicians helped to ensure PLA troops could transit into Russia despite rail-gauge differences between the two countries.⁵⁹ But limitations on the Joint Logistic Support Force's capacity to operate abroad would mean support for large-scale humanitarian assistance and disaster relief operations or NEOs would fall to the services, foreign partners, or civilian contractors.

A Global, Expeditionary Joint Logistic Support Force

A different scenario imagines the People's Liberation Army maintaining a larger overseas presence. In this scenario, the People's Liberation Army would make additional contributions to UN peacekeeping missions, expand patrols of critical sea lanes, and maintain a forward capability that could be used to strike and raid state and nonstate actors in response to threats against Chinese interests.⁶⁰ Some operations would involve single services, but joint task forces would be established

56. Joel Wuthnow, "PLA Operational Lessons from UN Peacekeeping," in *PLA beyond Borders*, 231–58; and Mehga Rajagopalan, "China to Send Elite Army Unit to Help Fight Ebola in Liberia," Reuters (website), October 31, 2014, <https://www.reuters.com/article/us-health-ebola-china/china-to-send-elite-army-unit-to-help-fight-ebola-in-liberia-idUSKBN0IK0N020141031>.

57. Peltier, *China's Logistics Capabilities*, 11.

58. Wang Junbo 王均波, Guo Chen 郭晨, and Yang Zhengwen 杨正文, "仗打到哪里, 管线就铺设到哪里" [Pipelines will be constructed wherever the battle is fought], China Military Online, September 29, 2019, http://www.81.cn/lqbz/2019-09/29/content_9639683.htm.

59. Chen Zhuo, "Chinese Train Echelon Departs for IAG 2019," China Military Online (website), July 18, 2019, http://eng.chinamil.com.cn/view/2019-07/18/content_9562097.htm.

60. Oriana Mastro, "A Global Expeditionary People's Liberation Army, 2025–2030," in *People's Liberation Army in 2025*, 207–34.

in more complex situations.⁶¹ Overseas basing would expand to include up to a dozen facilities with prepositioned supplies, port and airport facilities, support and combat troops, etcetera. In this scenario, the Joint Logistic Support Force would emerge as a lead coordinator for strategic delivery. In support of expeditionary operations, the force would station personnel overseas and dispatch units with sizes equal to or larger than that of a battalion.

Lead Coordinator

As in the first scenario, the Joint Logistic Support Force would oversee strategic delivery bases within China and manage civilian-support fleets. But these roles would be subsumed within larger transportation and sustainment responsibilities. In effect, the Joint Logistic Support Force would become a functional combatant command. These responsibilities would not imply the establishment of geographic combatant commands, as in the US system; the Joint Logistic Support Force could support combat troops operating under joint task forces or under direct leadership from the Joint Staff Department of the Central Military Commission (CMC).⁶² Such an innovation has been discussed in some PLA circles. According to scholars from the Academy of Military Science, a current PLA weakness is the lack of an equivalent to United States Transportation Command. These scholars recommend establishing a similar entity to “perform diversified tasks overseas, strengthen the construction of overseas strategic delivery capabilities, and become an overseas strategic delivery force commensurate with China’s status and compatible with the military’s tasks.”⁶³ Likewise, other PLA experts call for a “centralized and unified transportation and delivery command [that] strengthens communication and coordination between relevant departments at home and abroad.”⁶⁴

In the transportation arena, a new division of labor would give the Joint Logistic Support Force a stronger operational role. The services would build and train strategic delivery assets, but taskings would come from JLSF headquarters, with approval from the Joint Staff Department (which has de facto seniority to the services and JLSF headquarters because the Joint Staff Department director sits on the Central Military Commission). In addition, the Joint Staff Department would manage overseas operations, as it has done since 2016.⁶⁵ According to one inferential argument, the Joint Logistic Support Force may already take operational guidance from the Joint Staff Department (rather than the Central Military Commission’s Logistic Support Department).⁶⁶ Such an arrangement would be consistent with the aim of the reforms, which is to distinguish between those responsible for operations—a role the Joint Logistic Support Force possesses as an independent force—and the services, which are responsible for force building. But as an independent force, the Joint Logistic

61. Phillip C. Saunders, *Beyond Borders: PLA Command and Control of Overseas Operations*, Strategic Forum no. 306 (Washington, DC: Institute for National Strategic Studies, NDU Press, 2020).

62. Saunders, *Beyond Borders*.

63. Dong Zhigao 董智高 and Zhou Lei 周磊, “关于海外军事后勤保障力量建设的认识与思考” [Understanding and thinking on the construction of overseas military logistics support forces], 国防科技 [*National Defense Science & Technology*] 37, no. 2 (2016): 86.

64. Wang Tianze 王天泽, Qi Wenze 齐文哲, and Hai Jun 海军, “海外军事基地运输投送保障探讨” [Discussion on transportation and support of overseas military bases], 国防交通工程与技术 [*National Defense Transportation, Engineering, and Technology*] 16, no. 1 (2018): 33.

65. Yao Jianing, ed., “PLA Sets Up Overseas Operations Office to Strengthen Overseas Rapid Reaction,” Wayback Machine, March 25, 2016, http://web.archive.org/web/20200119054234/http://english.chinamil.com.cn/news-channels/pla-daily-commentary/2016-03/25/content_6977517.htm.

66. Luce and Richter, “Handling Logistics,” 72.

Support Force has both a force-building role and an operational role—like the Strategic Support Force and the former Second Artillery Corps. Like United States Transportation Command, the Joint Logistic Support Force may have subcommands responsible for airlift and sealift; the force could task cargo planes, under a US-style “air mobility command,” to conduct troop transfers or to resupply China’s overseas garrisons, whereas replenishment ships would fall under a new sealift command.

The Joint Logistic Support Force would also assume responsibilities for overseas stockpiles and distribution. A larger, overseas PLA presence would strengthen the rationale for prepositioning supplies and equipment as well as provide the means to distribute them. One model would be the 12 distribution centers operated by the US Defense Logistics Agency in eight countries. For instance, Defense Logistics Agency Distribution Yokosuka has “general purpose, humidity controlled, secure, hazardous material, freeze, and chill warehousing capabilities.”⁶⁷ The size and scale of PLA distribution centers would be smaller, but they would need to have similar capabilities in principle. This approach would solve a current dilemma: Some products cannot be procured abroad by Chinese enterprises or third parties, and stockpiles managed by the individual services are more “wasteful” than those managed by a joint entity.⁶⁸ The PLA Navy has already begun to adopt this solution by stockpiling goods in Djibouti, but the nature of this arrangement conflicts with PLA logistical reforms that aim to centralize the management of supplies. Overseas logistics hubs are intended to support multiple services; thus, the navy would cede this responsibility to the Joint Logistic Support Force.

Larger Deployments

A related change would be the deployment of significantly larger numbers of logistics troops. In the first scenario, JLSF deployments would occur within niche areas. These roles would continue in the second, expanded scenario. But, in accordance with its broader responsibilities, the Joint Logistic Support Force would also deploy specialists to manage warehouses, perform engineering tasks, coordinate transportation, and provide overseas contracting support. The force might, for example, dispatch military representatives to the foreign offices of state-owned enterprises, where the representatives would track available resources, supervise training, and serve as operational liaisons. Some Chinese embassies could have a JLSF attaché who is responsible for liaising with host governments and identifying future logistical requirements.

Entire JLSF units could also deploy to support expeditionary operations. Such deployments would be most likely if the People’s Liberation Army were to conduct other joint operations in which the logistical capabilities of services were insufficient or duplicative. In this case, the Joint Logistic Support Force could leverage experience gained in transregional exercises and other training within China. Deployed joint logistics brigades could set up mobile food and water stations; maintain or improve highways; conduct rapid resupply to remote areas; set up modular field camps for brigade-sized units; conduct mobile refueling; carry out rapid deliveries via unmanned aerial

67. “DLA Distribution Yokosuka, Japan,” Defense Logistics Agency (website), n.d., <https://www.dla.mil/Distribution/Locations/Yokosuka.aspx>.

68. Dong Zhigao and Zhou Lei, “Understanding and thinking,” 85.

vehicles; monitor equipment status in climates where wear and tear is common (as they have done in Tibet); and provide commanders with an accurate picture of fuel, ordnance, and medical conditions.⁶⁹

A final JLSF role in this scenario would be supporting multinational, joint operations. China's recent overseas operations have been relatively self-contained, with limited need to work with foreign partners. (China's counterpiracy patrols have taken place outside the multinational coalitions led by the United States and the EU, for example.) But in the future, China might work more closely with other nations. For example, the People's Liberation Army might participate in combined anti-insurgency operations with Pakistan to protect Belt and Road Initiative (BRI) projects or border-defense operations with Tajikistan or Afghanistan. Closer to home, small, combined operations have already occurred: China and Tajikistan have carried out border patrols, and Chinese law enforcement services have conducted joint patrols of the Mekong River.⁷⁰ Multinational operations would create the need for a common logistical support function, similar to the role played by NATO's joint logistical support groups. These entities, which one US Army officer has called "sustainment brigade[s] on steroids," both directly support combat forces from multiple services and coordinate

	Regionally Focused People's Liberation Army	Global, Expeditionary People's Liberation Army
Transportation	Manage civilian maritime and air-support fleets	Manage civilian support fleets and military sealift, airlift, and replenishment
		Liaise with Chinese state-owned enterprises abroad
Other Sustainment Categories	Manage strategic delivery bases within China	Manage overseas distribution centers
	Deploy overseas medical and other support contingents on an ad hoc basis	Provide forward medical, engineering, and contracting services
		Provide large-scale logistical support for joint operations
		Coordinate with coalition partners

Table 8-1. Summary of the two scenarios

69. Sun Xingwei 孙兴维, Cheng Rong 程荣, and Wei Lianjun 魏联军, "构筑战略投送立体大动脉" [Build a three-dimensional artery for strategic delivery], *PLA Daily*, October 17, 2017, 6; Liu Yibo 刘一波 and Chen Yufu 陈玉富, "西宁联勤保障中心某部: 科学调度打造一体联动保障网络" [A Xining Joint Logistics Support Center unit: Scientifically building an integrated joint support network], China Military Online, February 12, 2020, http://www.81.cn/l-b/2020-02/12/content_9867608.htm; Lai Yuhong and Jing Bin, "PLA's First Field Modular Camping and Supporting System Puts into Use," China Military Online (website), July 28, 2020, http://www.81.cn/jwywpd/2020-07/28/content_9866584.htm; "重回演兵场, 全域保障为打赢" [Return to the exercise field, winning through multidomain support], China Military Online (website), August 30, 2019, http://www.81.cn/2019zt/2019-08/30/content_9606398.htm; Wang Junbo 王均波 and Zhu Sheng 朱胜, "郑州联勤保障中心组织无人机投送能力实飞验证" [Zhengzhou Joint Logistic Support Center unmanned aerial vehicle delivery test flight], China Military Online (website), December 24, 2019, http://www.81.cn/lqbz/2019-12/24/content_9702291.htm; *PLA Daily*, "联勤保障旅成为战场新质保障力量" [Joint Logistic Support Brigade has become a new quality support force on the battlefield], People's Network (website), February 20, 2020, <http://military.people.com.cn/n1/2020/0220/c1011-31596312.html>; and Lai Yuhong 赖瑜鸿, "无锡联勤保障中心某保障旅 一次驻训 三换场地" [A support brigade of the Wuxi Joint Logistic Support Center changes venues three times in a single training exercise], People's Network (website), July 25, 2018, <http://military.people.com.cn/n1/2018/0725/c1011-30168253.html>.

70. "Chinese, Tajik Frontier Units Conduct Joint Border Patrol," China Military Online (website), September 19, 2017, http://eng.chinamil.com.cn/view/2017-09/19/content_7762174.htm (page discontinued).

logistics between allies and with host nations and international organizations.⁷¹ Table 8-1 recapitulates the two scenarios previously discussed, dividing JLSF roles by transportation and other functions.

Challenges and Risks

In both scenarios, the Joint Logistic Support Force would perform logistical functions that suit changing operational realities. Whether it plays a regional role or a more global one, the new joint logistics force could provide cost savings at a time when the growth of China's defense budget has slowed. But these strategic benefits would depend on the People's Liberation Army's ability to overcome difficulties and manage risks. The second scenario, which envisions a significant realignment of operational responsibilities and expanded deployments, would be especially hard to attain within a decade, but not impossible, given major operational needs and decisive leadership. Problems could include pushback from the services or the theater commands, organizational mismatches, lack of overseas expertise and jointness among JLSF personnel, and risks to the command and information networks that would be needed to fashion a more cohesive joint logistics system abroad.

The first challenge is bureaucratic resistance. One disadvantage facing the Joint Logistic Support Force is its bureaucratic grade (theater deputy leader), which is a step lower than that of the services and the theaters, weakening the force's hand in negotiations. One could imagine the PLA Navy lobbying for a transfer of the transport ship *dadui* from the Joint Logistic Support Centers to the naval fleets. Likewise, the air force chief could make a similar argument about civilian aviation assets. Similarly, theater commanders could argue for control over civil transport units, which could reduce their availability for overseas operations. Empowering the Joint Logistic Support Force with responsibilities like those assigned to United States Transportation Command or the Defense Logistics Agency at the expense of the services would also invite resistance. Neither the PLA Navy nor the PLA Air Force should be expected to give up any remaining operational authority without a fight. (Indeed, following the 2016 reforms, all services managed to keep a hand in operations; for instance, the navy continues to oversee anti-piracy operations, despite this role having been nominally redirected to the Joint Staff Department.)⁷² Xi Jinping has demonstrated an ability to overcome such resistance, but his successor—if one arrives in the next decade—might lack a similar ability to rein in the bureaucracy.

The second challenge is misalignment between roles and organizations. The current JLSF structure is optimized for domestic and regional contingencies; the Joint Logistic Support Centers are configured to focus on the maintenance and resupply requirements of the theaters in which they are located. Joint Logistic Support Centers could play a limited, overseas role, such as directing the assets of civilian-support fleets operating far beyond China's coasts, but the expanded set of JLSF roles proposed in the second scenario would likely require stronger central management of operations, partner engagement, force development, etcetera. The menu of options is limited, and

71. Aaron Cornett, "Multinational Operations: JLSG Offers Effective Role with Allies, Partners," US Army (website), January 16, 2020, https://www.army.mil/article/231676/multinational_operations_jlsg_offers_effective_role_with_allies_partners; and NATO, *Allied Joint Doctrine for the Joint Logistic Support Group*, Allied Joint Publication 4.6(C)(1) (Brussels: NATO Standardization Office, 2018), 1–8.

72. Saunders, *Beyond Borders*, 6–7.

the ideal choice depends on the nature and degree of responsibility and the willingness to delegate.⁷³ One option would be a dedicated overseas operations office within JLSF headquarters. Other options would include handing this responsibility to a strategic delivery base or designating a Joint Logistic Support Center to lead in this area. (The prime candidate, given its location and maritime roles, would be the Guilin Joint Logistic Support Center.)

The third challenge is human capital deficiencies. Unlike the PLA Navy, the Joint Logistic Support Force is essentially a homebound organization; only a handful of the force's current personnel have any experience supporting expeditionary operations, and the force has no experience operating overseas distribution centers. One group of Chinese scholars argues the People's Liberation Army's future logistics personnel will need more exposure to international laws, policies, and operating environments, pointing to changes in training and educational curricula in the military.⁷⁴ Others recommend a training course for logisticians who are preparing for overseas assignments (versus a general track for those anticipating domestic assignments) as well as changes to the personnel system, including rotations between domestic and foreign bases and stronger incentives for overseas work.⁷⁵

Given the focus of Chinese power projection, JLSF force development will have to produce a greater understanding of naval and air force requirements. Drawn from the military regions and the General Logistics Department, most JLSF personnel—in particular, most senior leaders—are ground-force officers. (As of March 2020, the JLSF commander was an air force officer, but most of his subordinates, including all Joint Logistic Support Center directors, were army officers.) Supervising the civilian-support fleets and supporting joint task forces—not to mention playing a role in managing military airlift and sealift—would require stronger expertise in these domains. This expertise could be acquired in two ways: first, absorbing talent directly from the services, which would come at their expense and, thus, invite resistance (either by converting entire units or through rotational assignments); and, second, building more diverse expertise from the bottom up, which may require onerous changes to recruitment, training, and education. But a precedent exists: The Strategic Support Force reportedly absorbed some cyber units previously affiliated with the services.⁷⁶ Failure to increase jointness would provide the services a handy argument for overseas logistics remaining in their purview.

The fourth challenge is mitigating operational risks. Despite its weaknesses, a piecemeal approach to overseas logistics has at least one operational advantage: reduced exposure to systemic failure. A disruption in supplies in a single port, for instance, would not have broader consequences. A more integrated system, in contrast, would require the Joint Logistic Support Force to establish reliable command, control, and communications networks as well as logistics information systems, as the force has done at home.⁷⁷ (Notably, accomplishing this feat would also be a challenge if the PLA Navy were to retain the lead role.) But these links would operate beyond the safety of the “Great

73. Saunders, *Beyond Borders*.

74. Wang Tianze, Qi Wenzhe, and Hai Jun, “Transportation and support,” 35.

75. Dong Zhigao and Zhou Lei, “Understanding and thinking,” 85.

76. John Chen, Joe McReynolds, and Kieran Green, “The PLA Strategic Support Force: A ‘Joint’ Force in Information Operations,” in *PLA beyond Borders*, 149–78.

77. Erin Richter, LeeAnn Ragland, and Katherine Atha, “General Logistics Department Organizational Reforms: 2000–2012,” in *The PLA as Organization v2.0*, ed. Kevin Pollpeter and Kenneth W. Allen (Vienna, VA: Defense Group Inc., 2015), 216.

Firewall,” thus presenting attractive targets to adversaries collecting intelligence or developing the ability to complicate Chinese operations in a conflict. The links might also be harder to repair. (These risks should be well known to the People’s Liberation Army, which has similarly targeted US global logistics networks.)⁷⁸ A priority for the Joint Logistic Support Force would therefore be developing the technical expertise to keep the system running.

Conclusion

The People’s Liberation Army has improved its ability to conduct complex, joint operations at home, but its joint capabilities abroad are less well developed.⁷⁹ To move from single-service to joint operations far beyond China, the People’s Liberation Army will require further changes to its logistics system and other functions, such as command, control, communications, computers, intelligence, surveillance, and reconnaissance as well as firepower. These changes would also help the People’s Liberation Army shift its focus from nontraditional security to the projection of combat power at longer ranges from the mainland. Whether and how the logistics system will evolve to mirror the joint structure instituted within China more closely remains an open question.

Regardless of whether the Joint Logistic Support Force takes a regional form or a global one, as in the first and second scenarios discussed previously, these new developments will have broad consequences for both the People’s Liberation Army and the United States, which until now has been the world leader in expeditionary operations. In the first scenario, the People’s Liberation Army would continue to focus its expeditionary logistics on nontraditional security operations; in the second, the organization could conduct some joint combat missions, though probably not at the scale or complexity at which the US military conducts them. From a US perspective, the first scenario would imply less mature capabilities for projecting combat power and thus pose fewer threats to US interests. The first scenario might even further US interests if the operations were focused on regional public goods. The second scenario would pose more problems for the United States if the People’s Liberation Army were to employ its growing combat capabilities to establish itself as an influential security partner for third-party countries, thus undercutting US advantages in security assistance. The People’s Liberation Army might even use these capabilities to intimidate or to strike US allies or partners—or even US forces—directly.

Several indicators may help to predict future developments in China’s overseas logistical capabilities. The first indicator is evolving security assessments: If the People’s Liberation Army sees reduced threats at home or in the region or growing challenges abroad, the organization might focus more of the Joint Logistic Support Force’s attention overseas. Second is the force’s role in strategic delivery: Supervising civilian-support fleets or managing a support base in China would suggest a narrower role than directly leading assets owned by the services. Internal PLA discussions could therefore indicate future changes, especially if the organization were to consider

78. Roger Cliff et al., *Entering the Dragon’s Lair* (Santa Monica, CA: RAND Corporation, 2007), 60–62; and Yaqiu Wang, “In China, the ‘Great Firewall’ Is Changing a Generation,” *Politico* (website), September 1, 2020, <https://www.politico.com/news/magazine/2020/09/01/china-great-firewall-generation-405385>.

79. Cozad, “Joint, Combat Ready PLA?”; and Joel Wuthnow, “A Brave New World for Chinese Joint Operations,” *Journal of Strategic Studies* 40, no. 1-2 (2017): 169–95.

a combatant command model further. Third, changes to JLSF training or to educational or personnel policies could lay the groundwork for a greater capacity to operate overseas. The fourth indicator would be research or other evidence the Joint Logistic Support Force is considering an information platform to provide a common operational and management picture for global logistics. Such indicators might include PLA examinations of similar US global information systems, like the Army Enterprise Systems Integration Program.⁸⁰ Scholars should pay attention to these indicators and other signs China's joint logistics forces are preparing to support a global, expeditionary People's Liberation Army.

80. National Research Council, *Force Multiplying Technologies for Logistics Support to Military Operations* (Washington, DC: National Academies Press, 2014), 109–25.

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Afterword

Roy Kamphausen

I still remember clearly how the National Bureau of Asian Research began collaborating with the US Army War College Strategic Studies Institute. Colonel Larry Wortzel, US Army retired, called me in spring 2005 to ask whether the National Bureau of Asian Research wanted to take over from the Heritage Foundation and the American Enterprise Institute, in partnership with the US Army War College's Strategic Studies Institute, to produce the annual conference and edited volume that had come to be known as the Carlisle People's Liberation Army (PLA) Conference. Larry was soon to depart from the Heritage Foundation, and no one there or at the American Enterprise Institute was interested in keeping the effort going. To a retired US Army China foreign area officer (FAO), the invitation to work on the premier conference about the People's Liberation Army was an opportunity not to be missed; indeed, it was to be treasured. For the last 15 years, it has proved to be a professional privilege of the highest order.

As the National Bureau of Asian Research's involvement in the PLA Conference comes to an end, assessing the work of this era seems appropriate. In this afterword, I reflect on the history of the conference and the key people who made it a success, examine some of the changes in the environment that have shaped PLA studies over this period, highlight some of the conference's contributions, and point to important questions that need assessing. I begin with my thanks.

Appreciation

Larry Wortzel would often say, "The PLA Conference was all Ambassador Jim Lilley's inspiration." For Ambassador Lilley, the People's Liberation Army—an organization that had forcibly cleared Tiananmen Square on June 3–4, 1989, killing hundreds, if not thousands, of fellow Chinese in the process—merited intensive study by Western observers. Lilley's prominence and initiative built on early efforts by Denny Lane and others to conduct a small-scale conference on the People's Liberation Army. First held at a Staunton Hill, Virginia, estate in Virginia in 1990, these early conferences featured a small number of highly expert PLA specialists from academia, the military, and intelligence organizations. After Jim Lilley passed away in 2009, we dedicated the 2010 volume, *The PLA at Home and Abroad: Assessing the Operational Capabilities of China's Military*, to him with a foreword written by the president he served so well, George H. W. Bush.

Yet, Larry Wortzel's energy and insights, good humor, and deep network of contacts made an indelible imprint on the conference. When he became director of the Strategic Studies Institute in 1999 after having served as an Army attaché at the US embassy in Beijing, the institute's role in the conference was solidified. Larry's approach comprised three essential components: emphasizing original, Chinese-language sources; seeking observers and analysts with deep, in-country experience to provide context for developments; and focusing on relevance for the decisionmaker. These principles remain foundational to the conference to this day.

Over these last 15 years, the distinguished Asia experts at the Strategic Studies Institute, including Andrew Scobell, David Lai, and, most recently, Roger Cliff, have been tremendous collaborative partners. Doug Lovelace proved a vital leader as director of the Strategic Studies Institute for many years, and he provided the top cover that helped us get important things done. New Strategic Studies Institute Director Carol Evans follows in Doug's action-oriented footsteps, and I anticipate her tenure will be marked with similar accomplishments.

United States Pacific Command (now United States Indo-Pacific Command) joined the Carlisle PLA Conference in 2010 as a funding and knowledge partner at the initiative of the inaugural head of the China Strategic Focus Group, Dr. David Dorman. Dorman was succeeded by Brigadier General Dave Stilwell, US Air Force retired, who had been the US defense attaché in Beijing. Stilwell led the China Strategic Focus Group until he left to become assistant secretary of state, East Asia and Pacific affairs in the Trump administration. For nearly a decade, Strategic Focus Group Deputy Director Chad Sbragia provided vision and practical guidance to the conference before he too moved on, in 2019, to become the first deputy assistant secretary of defense, China in the Office of the Secretary of Defense. United States Indo-Pacific Command has been a vital partner in the effort over the years, conveying the priorities of the combatant commander, which brought a sense of urgency to the work of the conference. And for a couple of years, the Bush School of Government and Public Service at Texas A&M University was a conference partner, thanks to the collaborative efforts of Andrew Scobell after he moved from the Strategic Studies Institute to College Station, Texas.

Another hallmark of the conference series during this time was the high-level keynote speakers we attracted. Then-Director of National Intelligence and former Commander, United States Pacific Command, Admiral Dennis Blair was a highlight. Others included retired Chief of Naval Operations Admiral Jon Greenert; Lieutenant General Charles Hooper, US Army; then-Deputy Assistant Secretary of Defense Chad Sbragia; then-Acting Assistant Secretary of Defense Dave Helvey; and Brigadier General Brian Davis, who was the US defense attaché in Beijing at the time.

Two legends of PLA studies were indispensable to the success of the conference series. First, Paul Godwin, the towering Brit and former US marine, lent gravitas to our work based on his stature as the leading analyst of the People's Liberation Army at the National Defense University. Paul held those seeking to understand the People's Liberation Army to high standards, even as his gentle nature endeared him to the same rising analysts. Second, Ellis Joffe, for whom the National Bureau of Asian Research named the Ellis Joffe Prize for PLA Studies, an award for rising specialists in Chinese security, has also had a deep impact on the Carlisle PLA Conference. Paul and Ellis's examples of wisdom, collegiality, and grace set the tone for all conference participants. Cynthia Watson, interim provost at the National Defense University, captured the essence of Ellis in her remembrance of him in *The People of the PLA 2.0*, the volume from the 2018 conference, recounting, "Joffe was an extraordinarily perceptive analyst of Chinese intentions and the ways in which China intended to use the PLA to achieve its goals."¹ Cynthia has been a beloved favorite of those who have organized the conference since 2006. Her handwritten notes of appreciation,

1. Cynthia Watson, "Ellis Joffe and the Founding Generation of PLA Studies: Thoughts for Younger Scholars," in *The People of the PLA 2.0*, ed. Roy Kamphausen (Carlisle, PA: Strategic Studies Institute, US Army War College Press, 2021), 377.

which adorn the cubicle walls of the National Bureau of Asian Research offices in both Seattle and Washington, DC, have been a source of deep encouragement to our staff—and to me.

And this acknowledgment brings me to my National Bureau of Asian Research colleagues, past and present, to whom I owe a deep debt of gratitude. Sarah Snyder, Daniel Alderman, Luke Armerding, Travis Tanner, Tiffany Ma, Audrey Mossberger, Jessica Drun, Ali Szalwinski, and Jeremy Rausch, among many others, have made the process of putting together the conference and edited volume a labor of love each year. These colleagues have infused the work with their good humor and passion for what matters.

Finally, my appreciation to the many folks who attended the conferences over the years: whether attaché or analyst, generalist or specialist, together we built a community dedicated to understanding the People’s Liberation Army to further the interests of the United States. We forged “the Carlisle spirit” along the way—a tribute to our community and something I will cherish forever.

Changes

The perspective of 15 years’ hindsight yields several observations about the conference and its attendees. First, the conference exploded in size over this period. In 2011, recognizing both the demand for more specialists and the imperative to broaden and diversify participants, we opened attendance to a broader group of experts and simultaneously adopted a “senior scholar/rising analyst” approach to choosing chapter-author combinations. New groups that were represented included United States Military Academy faculty, members of the defense industry, and congressional staff, all of whom have a stake in understanding the evolution of the People’s Liberation Army. Attendance increased from 60 participants in 2006 to more than 110 at the last in-person conference in 2018. At that conference, more than 30 percent of attendees were new participants.

The composition of conference attendees has changed as well. Many US Army China FAOs—Dennis Blasko, Cortez Cooper, John Corbett, Dave Finkelstein, Lonnie Henley, Charles Hooper, Frank Miller, and Larry Wortzel—as well as retired US Air Force FAO Ken Allen, de facto US Navy FAOs Mike McDevitt and Bud Cole, and intelligence community analysts had long been conference stalwarts, dating back to the earliest days at Staunton Hill. These FAOs represented a generation with deep experience in China, operational exposure to the People’s Liberation Army, or both. Over the years, a younger civilian generation of attendees has emerged, one with exceptional language skills and enhanced research abilities along with research experience in China. This generation includes Oriana Skylar Mastro, Andrew Erickson, and Nathan Beauchamp-Mustafaga, among many others. And a new generation is emerging—one that is much more diverse and has even more advanced Chinese-language abilities. As previously mentioned, conference attendees are no longer just PLA specialists. Congressional staffers, Pentagon policy staffers, and security generalists are driving the recent growth in numbers, expanding the reach and impact of the conference beyond that which was possible in the past.

The focus of the conference has evolved as well. We intentionally evolved the analytical emphasis from the very detailed, bottom-up, nuts-and-bolts approach to PLA modernization of

the previous period. We assessed China's military development over this period from a regional nuisance to the "pacing threat" of today, concluding the conference should begin to address more than the mere actions of the People's Liberation Army and move toward addressing questions about the impact of this development on the United States. Doing so also resulted in a natural shift toward examining the People's Liberation Army's work at the operational and strategic levels, even as the organization was evolving from a rudimentary and simplistic fighting force into a modernizing, joint and expeditionary force.

In the intervening years, new, service-specific research organizations at the US Naval War College and the US Air War College—the China Maritime Studies Institute and the China Aerospace Studies Institute, respectively—were established. These organizations focus on their corresponding PLA services. By contrast, the US Army War College and Strategic Studies Institute eschewed a service-specific approach. Instead, the organization saw the study of the People's Liberation Army as an emerging, joint force to be an important contribution of the conference and volume series. This broader approach to studying the People's Liberation Army is consistent with the US Army's long-standing contribution to the Joint Force, perhaps best reflected by the Army's provision of the lion's share of Joint Force China FAOs. Consequently, conference research themes have not been limited to a focus on the ground force, enlarging the conference's contribution to the broader US national defense community. The compelling titles of conference volumes such as *Chinese Lessons from Other Peoples' Wars* (2011), *Learning by Doing: The PLA Trains at Home and Abroad* (2012), *Assessing the People's Liberation Army in the Hu Jintao Era* (2014), *The People's Liberation Army in 2025* (2015), and *Securing the China Dream: The PLA's Role in a Time of Reform and Change* (2020) convey this breadth of focus.

Backdrop

The strategic and regional environments provide an essential context for appreciating the developments in the conference. First, the twin wars in Afghanistan and Iraq have dominated the American national security landscape. Consumed as the national defense enterprise was by those wars—China was only named a "strategic competitor" in the 2018 National Defense Strategy—finding a policy audience that was receptive to the idea the People's Liberation Army presented real and growing challenges to the United States and its allies was difficult.² Efforts along the way, such as the Obama administration's rebalance to Asia, made modest improvements in force structure and capabilities. The oft-stated rhetorical commitment by successive US administrations to provide a force structure for the Indo-Pacific region befitting its importance has simply not been matched by reality; for example, the recent Global Posture Review makes only very modest changes to force posture in the region.

The People's Liberation Army has changed dramatically since 2006. Sharp increases in naval ship production, the construction of military facilities on reefs in the South China Sea, the enormously consequential impacts of the 2016–17 reforms and reorganization, and hypersonic capabilities

2. James Mattis, *Summary of the 2018 National Defense Strategy of the United States of America* (Washington, DC: Office of the Secretary of Defense [OSD], 2018).

and intercontinental ballistic missile silos are indicative of a military that seeks to achieve a self-proclaimed “world-class status” by mid-century; attain regional security dominance and deny US access in a crisis; and use PLA military power to dictate broad, regional commerce norms. Yet, the People’s Liberation Army’s marked improvements in capabilities occurred during the period the United States was consumed with the wars in Afghanistan and Iraq. The People’s Liberation Army modernized and prioritized developments as it wished precisely because it faced no real warfighting challenge. Sure, the PLA Navy (PLAN) has joined anti-piracy efforts in the Gulf of Aden since 2008 and contributed to UN peacekeeping operations on a larger scale. But these operations have been measured and highly calibrated efforts to grow the People’s Liberation Army’s international presence modestly, and the operations do not systemically benefit the international security environment.

These events have occurred within the context of broader global dynamics—a global financial crisis, China’s economic miracle, and judgments in Beijing about the secular decline of the United States, among other factors—that have accelerated China’s rise. The debate about whether the People’s Liberation Army is a global military has been hastened by these developments and ferreting out what is true from what is necessary is a challenge.

Highlights of the Work

The contributions of dozens of authors to the body of work compiled over 15 years are too many to list, but several bear mentioning: Dennis Blasko’s examination of PLA training and exercises in “Clarity of Intentions: People’s Liberation Army Transregional Exercises to Defend China’s Borders”; Susan Puska’s magnum opus on Chinese logistics in “Taming the Hydra: Trends in China’s Military Logistics since 2000”; and Nadège Rolland’s consideration of PLA priorities in “Securing the ‘China Dream’ along the Belt and Road” come to mind.³

Moreover, three chapters in particular stand out for their unique, impactful, and durable analysis.

The first is Dave Finkelstein’s determination of China’s new strategic direction. Finkelstein’s explanation in 2007 of the strategic guidelines of 1993 detailed the People’s Liberation Army’s reorientation from ground force-intensive preparations to defend China’s northwestern border from Soviet invasion.⁴ Such a focus had been obviated by the border demarcation and demilitarization of border regions made possible by the Sino-Russian agreements that laid the groundwork for the Shanghai Cooperation Organisation. The new priority reoriented the People’s Liberation Army toward its eastern seaboard and Taiwan and presaged the tensions in the littoral space that are now so prevalent.

3. Dennis Blasko, “Clarity of Intentions: PLA Transregional Exercises to Defend China’s Borders,” in *Learning by Doing: The PLA Trains at Home and Abroad*, ed. Roy Kamphausen, David Lai, and Travis Tanner (Carlisle, PA: Strategic Studies Institute, US Army War College Press, 2012); Susan Puska, “Taming the Hydra: Trends in China’s Military Logistics since 2000,” in *The PLA at Home and Abroad: Assessing the Operational Capabilities of China’s Military*, ed. Roy Kamphausen, David Lai, and Andrew Scobell (Carlisle, PA: Strategic Studies Institute, US Army War College Press, 2010); and Nadège Rolland, “Securing the ‘China Dream’ along the Belt and Road,” in *Securing the China Dream: The PLA’s Role in a Time of Reform and Change*, ed. Roy Kamphausen, David Lai, and Tiffany Ma (Washington, DC: National Bureau of Asian Research, 2020).

4. David Finkelstein, “China’s National Military Strategy: An Overview of the ‘Military Strategic Guidelines,’” in *Right Sizing the People’s Liberation Army: Exploring the Contours of China’s Military*, ed. Roy Kamphausen and Andrew Scobell (Carlisle, PA: Strategic Studies Institute, US Army War College Press, 2007), 97, 126.

Second, in 2007, Ellis Joffe asked and answered the question: “What type of military does China want?” “A military commensurate with China’s status and aspirations for itself” was his answer at the conference. Subsequently, Ellis wrote a more formal answer: “The most basic, long-range, and unalterable objective of the Chinese leadership has been both to obtain recognition for China as a great power and to gain from the other great powers the respect and standing that come with this status.”⁵ This answer, both beguilingly imprecise and yet somehow exactly evocative of Chinese thinking, reflected Joffe’s unique ability to anticipate new developments in the People’s Liberation Army. The language became more widely used within PLA circles after Xi Jinping came to power, first in the defense white paper of 2013 and again in 2015 and 2019. Even so, today, Ellis’s answer strains to explain the naked ambitions that characterize Xi’s China as well as the much more assertive use of the People’s Liberation Army in the Indo-Pacific and, increasingly, around the globe.

Third, in a summary for *Chinese Lessons from Other Peoples’ Wars*, coauthors Andrew Scobell, David Lai, and I concluded, in a four-decade era in which the People’s Liberation Army has not fought a foreign foe, the organization’s analysts have prioritized studying how others have done so. Not surprisingly, when conducting historical analysis, PLA analysts are somewhat constrained in how freely their judgments can range. Yet, analysis indicates “Chinese strategic planners place a high priority on an accurate pre-conflict strategic assessment.”⁶ Whereas the US military’s tendency is to focus on the tactical and operational levels of war, the People’s Liberation Army’s focus is clearly on the strategic level. This emphasis on understanding how the use of Chinese force might yield strategic outcomes before the forces are committed arises from, and contributes to, a traditional risk aversion perspective on the part of the People’s Liberation Army. But the emphasis also provides a useful counterpoint to arguments the People’s Liberation Army is hellbent on preemptive war. This difference bears further attention.

Observations about the State of the Field

My first observation is the field of PLA studies has evolved from a niche set of considerations and themes about a force possessing limited projection capabilities and consumed with political work to a broad set of issues concerning an emerging, global force, albeit one still consumed with political work. Though the People’s Liberation Army is still very much in modernization mode, the impacts of PLA modernization are much more consequential for the region and the world. The People’s Liberation Army’s increasingly versatile conventional and nuclear missile capabilities can now reach the continental United States, an expanding arsenal of asymmetric warfare capabilities is supported by advances in the dual-use application of emerging and disruptive technologies, and a growing fleet of aircraft carriers and surface combatant vessels has begun to allow the organization to project power beyond the second island chain (SIC) and into the Indian Ocean region (IOR).

The second observation is the People’s Liberation Army is an odd mix of a military still rooted in its revolutionary past and one fixated on learning about the changing nature of warfare, the

5. Ellis Joffe, “The ‘Right Size’ for China’s Military: To What Ends?,” *Asia Policy* 4 (July 2007): 58.

6. Andrew Scobell, David Lai, and Roy Kamphausen, eds., “Introduction,” in *Chinese Lessons from Other Peoples’ Wars* (Carlisle, PA: Strategic Studies Institute, US Army War College Press, 2011), 22–23.

advanced militaries around the world, and the potential opportunities for impact. Huge, structural impediments remain, but the People's Liberation Army studies and learns nevertheless. In this respect, the organization had time to learn while the United States and its allies were fighting wars in Afghanistan and Iraq over the last two decades. No existential threats have commanded the attention of Chinese leaders, nor have the exigencies of dying soldiers diverted the People's Liberation Army's attention. The organization has been a learning organization, at least in part, because it could be. Yet, this emphasis on learning, in the abstract, cannot hope to compensate for a lack of operational experience. Irrespective of the progress made in structural reforms and equipment upgrades, many PLA specialists argue China's inability or unwillingness to renounce the political commissar system—still responsible for personnel, party, and security dossiers, for instance—remains a fundamental impediment to PLA modernization.

The third observation is the emergence of the view Chinese military studies is far too important to leave to the PLA experts. To some degree, this judgment is unfortunately well deserved. Though some PLA experts have prioritized understanding the problem at times when the stakes were far lower, the experts placed insufficient emphasis on the impacts of the problem on the United States. But, on another level, the judgment reflects the arrogance of American planners who apply cookie-cutter approaches to threat development and mitigation. Irrespective of the root cause of the judgment, PLA specialists must fight to remain relevant to decisionmakers who require a clear understanding of PLA intent and capabilities.

The principal challenge in studying the People's Liberation Army, then, is how to differentiate the analysis of a military still very much in transition to a joint force capable of sustained, out-of-region operations from expectations of the Chinese military based strictly on the Chinese economic miracle. Some assume the People's Liberation Army must be a global power because China is one. Yet the evidence casts doubt on conclusions made in haste about the global nature of the People's Liberation Army. Pockets of excellence are easy to find: missiles, naval ship production, cyber capabilities, and so forth. But the organization is still very involved in local economies and consumed with political work of various types (anticorruption, studying Xi Jinping's thought, etc.). Despite modernization, the very size of the People's Liberation Army means large amounts of outdated equipment still line PLA motor pools because upgrading the entire force with new systems is impossible. In addition, the organization's oft-cited lack of combat experience remains glaringly obvious. Indeed, the People's Liberation Army regularly notes these shortcomings.

How should we think about this challenge? It strikes me there are six questions the PLA-watching community needs to address.

- How do we reconcile the People's Liberation Army as a rapidly modernizing force with the many dimensions that suggest it should be considered nonthreatening? Imagine an American president saying American officers are unable to accomplish five key aspects of mission command, and the military suffers from a case of "peace disease" so severe the president has lost confidence in the military's ability to perform its missions altogether? Such statements seem inconceivable, yet

Xi Jinping has said these very things, deriding his own military for its lack of experience and competence.⁷

- How do we make sense of the historically risk-averse People's Liberation Army undergoing substantial change intended to make it more competent while the organization becomes more assertive in its near periphery? We must address whether the People's Liberation Army has a grand design for its development that is knowable and predictable or a pattern of incremental improvements may provide a better insight.
- Will China and its modernizing military draw from the historical patterns of previous rising powers, or will the People's Liberation Army follow new, self-designed norms? The implications of this question are enormous. Concluding the People's Liberation Army will do what outsiders predict it will do would be dangerously unhelpful to a better understanding of the organization's modernization trajectory.
- How will the Chinese Communist Party's (CCP's) domestic messaging adjust to the People's Liberation Army's evolving role of conducting foreign security missions beyond internal stability and security? China's expanding overseas assets (investment, capital, citizens, technology, etc.) have compelled the People's Liberation Army to become a more global and expeditionary force to help secure the assets.

The last two questions are contemporary ones.

- How should we understand the highly escalatory moves the Chinese national security system has taken within months of the conference on which this volume is based? Washington is abuzz about China's hypersonic missile tests, which coincided with the discovery of new, commercial imagery revealing the existence of more than 200 new nuclear silos in western China.⁸ Given this dramatic improvement in PLA deterrent capabilities and the rapid increase in PLA missiles, a fundamental shift is clearly underway in Chinese approaches to deterrence. Changes in nuclear posture may well set the scene for a launch-on-warning approach, even if it retains countervalue-targeting logic. The People's Liberation Army's commingling of nuclear and conventional missiles at the same bases further compounds the challenge of understanding what is apace and exponentially raises the risk of miscalculation. Moreover, escalation management has become a very real concern, yet the People's Liberation Army seems to spend little time working on this concern. The urgency of this challenge requires the West to commit itself to studying and understanding the challenge.

7. Dennis Blasko, "PLA Weaknesses and Xi's Concerns about PLA Capabilities" (testimony, Backlash from Abroad: The Limits of Beijing's Power to Shape Its External Environment, Before the US-China Economic and Security Review Commission, February 7, 2019), 3.

8. Theo Milonopoulos and Erik Lin-Greenberg, "Commercial Satellites – Not US Intelligence – Revealed China's Missile Program," *Washington Post* (website), August 3, 2021, <https://www.washingtonpost.com/politics/2021/08/03/commercial-satellites-revealed-chinas-missile-program-not-us-intelligence/>; and Demetri Sevastopulo and Kathrin Hille, "China Tests New Space Capability with Hypersonic Missile," *Financial Times* (website), October 16, 2021, <https://www.ft.com/content/ba0a3cde-719b-4040-93cb-a486e1f843fb>.

But in my mind, the far greater challenges are related to developments in conventional deterrence.

- How do US allies and partners, in addition to other countries of interest, deter gray-zone operations (with versions 2.0 and 3.0 likely in the offing), even as these operations might be mixed with conventional use of force and completely nonmilitary tools, such as economic coercion? If we consider Chinese security efforts in the 2010s to push the United States further from the Asian littoral, diminish US sea control, and potentially redraw exclusive economic zone (EEZ) boundaries by building islands from reefs, all of which falls below the threshold of war, then an urgent question for PLA watchers is how the People's Liberation Army might combine updated gray-zone tactics with previously successful (version 1.0) endeavors.

Ultimately, the United States must deter China from security objectives that run counter to US or allied interests without allowing war preparations to confuse the issue. Talk of war with China, even in scenarios that involve core issues for Beijing, has become much too cavalier for my taste—not least because such discussions devote too little time to examining the road to war and no time to how one might end a war between nuclear powers with uneven commitments to the contested issues.

In conclusion, PLA experts must continue to talk with operators and strategists in ways that inform contingency planning. Along the way, these experts must achieve solidarity with policymakers who need enough information to make considered decisions or recommendations without becoming experts themselves. This work is desperately important because the military component of Sino-American strategic competition is one that will be with us for decades.

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About the Contributors

Lucie Béraud-Sudreau joined Stockholm International Peace Research Institute (SIPRI) in February 2020 as the director of the Arms and Military Expenditure Programme. Her research interests focus on European and Asian arms trade, military spending and arms industry. She was previously a research fellow for defence economics and procurements at the International Institute for Strategic Studies (IISS) and an analyst at the French Ministry of Armed Forces.

David Brewster is a senior research fellow at the National Security College of Australian National University, where he works on Indian Ocean and Indo-Pacific affairs. He is the author of *Australia's Second Sea: Facing our Multipolar Future in the Indian Ocean, India and China at Sea: Competition for Naval Dominance in the Indian Ocean, India as an Asia Pacific Power*, and *India's Ocean: The Story of India's Bid for Regional Leadership*. He earned a PhD from the Australian National University, a Master of Laws degree from Columbia University, an Bachelor of Laws degree from University of Sydney, and a Bachelor of Economics from the University of Sydney.

Christopher Cairns is a research scientist in CNA's China and Indo-Pacific Security Affairs division. He holds a PhD in government from Cornell University, a Master of Science degree in human rights from the London School of Economics and Political Science, and a Bachelor of Science in Foreign Service degree in international politics from Georgetown University. Cairns speaks Chinese, German, and Spanish.

Roger Cliff is research professor of Indo-Pacific affairs at the US Army War College Strategic Studies Institute. His research focuses on China's military strategy and capabilities and their implications for US strategy and policy. He holds a PhD in international relations from Princeton University, a Master of Arts degree in Chinese studies from the University of California, San Diego, and a Bachelor of Science degree in physics from Harvey Mudd College.

R. Evan Ellis is a research professor of Latin American Studies at the US Army War College Strategic Studies Institute. His studies focus on the region's relationships with China and other non-Western Hemisphere actors and transnational organized crime and populism in the region. Ellis is the author of over 300 works, including *China Engages Latin America: Distorting Development and Democracy?*, *Transnational Organized Crime in Latin America and the Caribbean*, *China on the Ground in Latin America*, *The Strategic Dimension of Chinese Engagement with Latin America*, and *China in Latin America: The Whats and Wherefores*. He is the recipient of Colombia's Order of Military Merit José María Córdova. He holds a PhD in political science from Purdue University and a Bachelor of Arts degree in political science from Eastern Michigan University.

April A. Herlevi examines China's political economy and foreign economic policy to educate and inform policymakers, scholars, and the national security community. Herlevi serves as a senior research scientist in the China and Indo-Pacific Security Affairs Division at CNA, where she

focuses on the intersection between economics and national security and the increasing role of Chinese commercial, economic, and military actors globally. She is the author of works on China's foreign technology acquisition, the People's Liberation Army, state-owned enterprises, the foreign investment law, and domestic special economic zones. She holds a PhD in international relations and comparative politics from the University of Virginia, a Master of Public Policy degree from George Mason University, and a Bachelor of Arts degree in political science and Economics from North Carolina State University. She studied Mandarin at Tsinghua University in Beijing and Zhejiang University of Technology in Hangzhou.

Roy D. Kamphausen is president of the National Bureau of Asian Research (NBR). He is the author of chapters in National Bureau of Asian Research's *Strategic Asia* series and co-editor of the Carlisle People's Liberation Army Conference series since 2007. Kamphausen holds a Bachelor of Arts degree in political science from Wheaton College and a Master of Arts degree in international affairs from Columbia University. He studied Chinese at the Defense Language Institute and Beijing's Capital Normal University.

Roderick Lee is director of research at the Air University China Aerospace Studies Institute (CASI). Prior to joining CASI, he served as an analyst with the United States Navy covering Chinese naval forces. He earned his Master of Arts degree from George Washington University's Elliott School of International Affairs.

Paul Nantulya is a research associate at the Africa Center for Strategic Studies. His expertise includes African security issues, Afro-East Asian partnerships, and China-Africa relations. His forthcoming book examines the influence of traditional Chinese strategic culture on China's military strategy and statecraft in the western Pacific. Nantulya's publications include a chapter entitled "Dynamics of Conflict between China and the United States," a chapter coauthored with Raymond Gilpin and Phillip Carter III in *China's Global Reach: A Security Assessment*, and a chapter on "The Strategic Application of the Tao 道 of Soft Power: The Key to Understanding China's Expanding Influence in Africa."

Meia Nouwens is a senior fellow for Chinese defense policy and military modernization at the International Institute for Strategic Studies. Her expertise lies in China's international relations, regional strategic affairs, and cross-service defense analysis. She holds a Bachelor of Arts degree (with honors) in international relations and political science from Macquarie University, a Master of International Relations and Diplomacy degree from Leiden University in conjunction with the Clingendael Institute, and a Master of Philosophy in modern Chinese studies from the University of Oxford and Peking University.

Rebecca Pincus is an assistant professor in the Strategic and Operational Research Department (SORP) in the Center for Naval Warfare Studies at the US Naval War College. She previously served as primary investigator at the US Coast Guard's Center for Arctic Study and Policy. In 2015, she served as a Fulbright scholar in Iceland.

Joel Wuthnow is a senior research fellow in the Center for the Study of Chinese Military Affairs at the Institute for National Strategic Studies. His research areas include Chinese foreign and security policy, Chinese military affairs, US-China relations, and strategic developments in East Asia. He also serves as an adjunct professor in the Edmund A. Walsh School of Foreign Service at Georgetown University. Wuthnow earned a PhD in political science from Columbia University, a Master of Philosophy degree in modern Chinese studies from Oxford University, and a Bachelor of Arts degree in public and international affairs from Princeton University. He is proficient in Mandarin.

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