

**THE PLA AT HOME AND ABROAD:
ASSESSING THE OPERATIONAL CAPABILITIES
OF CHINA'S MILITARY**

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CHAPTER 7

CHINESE SEA POWER IN ACTION: THE COUNTERPIRACY MISSION IN THE GULF OF ADEN AND BEYOND

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The dramatic rise of piracy in the waters off of Somalia in 2008, combined with United Nations Security Council (UNSC) resolutions designed to empower other nations to fight that piracy, presented the Chinese with an historic opportunity to deploy a naval force to the Gulf of Aden. This chapter offers an assessment of the PLA Navy's (PLAN) mission and its implications. Emphasis is placed on the motivations and preparations for the mission; relevant operational details, including rules of engagement, equipment, personnel, and logistic support; degree of coordination with other militaries; domestic and international responses to the mission; and indications of the PLA's own assessment of its achievements regarding the deployment. The chapter then uses this case study to probe broader implications for the PLAN's role in defending China's expanding economic interests;

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its prospects for future participation in the global maritime regime; and associated implications for U.S. policy.¹

UNCHARTED WATERS

For the first time in its modern history, China has deployed naval forces operationally (as opposed to representationally) beyond its immediate maritime periphery to protect merchant vessels from pirates in the Gulf of Aden.² Supported by a supply ship, two PLAN vessels are escorting ships from China and other nations; the 1,000th was escorted on October 24, 2009.³ A week later, China's navy began the fourth deployment. What explains this unprecedented instance of long-distance, sustained operations?

MOTIVATIONS

Growing Sea Lines of Communication Security Imperatives.

China's leadership has identified the security of China's seaborne imports and exports as critical to the nation's overall development, and hence a vital and growing mission for the PLAN. The last two of the four "new historic missions" (新的历史使命) with which President Hu Jintao charged the People's Liberation Army (PLA) in 2004 reflect new emphases, and the fourth is unprecedented; all but the first may be furthered by naval development,⁴ provided that the operation is UN-led, multilateral, and targeted at nontraditional threats.⁵ Hu has also stated specifically: "As we strengthen our ability to fight and win limited wars under informatized conditions, we have to pay even more attention to improving non-combat mili-

tary operations capabilities.”⁶ In an attempt to transform Hu’s general guidance into more specific policy, articles in state and military news media have argued that to safeguard China’s economic growth, the PLA must go beyond its previous mission of safeguarding national “survival interests” (生存利益) to protecting national “development interests” (发展利益).⁷ High level PLAN officers are now conducting sophisticated analysis of the “nonwar military operations” needed to promote these interests.⁸

This guidance and policy implementation is informed by clear economic realities—themselves of particular importance for a leadership that has staked its political legitimacy on maintaining roughly 8 percent growth of an economy that remains reliant on extremely high levels of resource imports and manufactured goods exports. China depends on maritime transportation for 90 percent of its imports and exports. By some metrics, China has more seafarers, deep sea fleets, and ocean fishing vessels than any other nation.⁹ As of 2006, maritime industries accounted for \$270 billion in economic output (nearly 10 percent of gross domestic product [GDP]).¹⁰ Already at least tied with South Korea for status as the world’s largest shipbuilder, China aims to become the largest by 2015.¹¹ Chinese oil demand, growing rapidly, has reached 8.5 million barrels per day (mbtd) even amid the global recession.¹² China became a net oil importer in 1993, and will likely become a net gasoline importer by the end of 2009. While still a very significant oil producer, China now imports half of its crude oil, with 4.6 mbpd in imports as of July 2009. Seaborne imports, which even ambitious overland pipeline projects lack the capacity to reduce, constitute more than 80 percent of this total.¹³ At present, therefore, 40 percent of China’s oil comes by sea.

Why Beijing Had to Act.

Security of the sea lines of communication (SLOC) around the Horn of Africa is especially critical to major Chinese economic interests. China imports 16 percent of its overall energy (including one-third of its oil), as well as numerous strategic resources critical to manufacturing, from Africa. China is the European Union's (EU) second largest trading partner, the EU is China's largest, and much of their trade transits the Red Sea and Indian Ocean via container ship. Of the vessels transiting the Indian Ocean, 40 percent are Chinese.¹⁴ Some of China's 2,000 distant water fishing vessels, subsidized by Beijing, balance East Asia's dwindling fish stocks by exploiting the more numerous ones off the Horn of Africa.¹⁵

Perhaps nothing exemplified this vulnerability and Beijing's inability to address it more directly than two incidents at the end of 2008.¹⁶ On November 14, Somali pirates captured the fishing boat *Tianyu 8* and held its 24-member crew captive for 3 months.¹⁷ On December 17, nine men attempted to pirate the tanker *Zhenhua 4*, using makeshift rocket-launchers and AK-47 assault rifles. An otherwise defenseless crew unnerved the pirates with improvised Molotov cocktails,¹⁸ but it was a Malaysian military helicopter that compelled the attackers to retreat.¹⁹ All told, a fifth of the 1,265 Chinese-owned, -cargued, or -crewed ships transiting Somali waters in 2008 faced piracy, and seven were attacked.²⁰ This was part of a growing international problem that showed no sign of abating: of the 100 attempted piracies in 2008, 40 were successful, including the capture and detention of the VLCC *Sirius Star*.²¹

Official Explanations. China's government portrayed its decision to deploy naval vessels as a respon-

sible solution to an unexpected but tangible challenge to its sovereignty, security, and commerce.²² “Piracy has become a serious threat to shipping, trade, and safety on the seas,” Foreign Ministry spokesman Liu Jianchao explained. “That’s why we decided to send naval ships to crack down.”²³ This was part of a carefully-orchestrated campaign. Various Chinese strategists floated “trial balloons” in the news media in mid-December, giving the government a chance to gauge possible international reactions.²⁴ As part of a larger effort to increase foreign perceptions of Chinese transparency, the Ministry of National Defense Information Office (MNDIO), conceived in late 2007 and active from January 8, 2008, plays new role both at home and abroad in interfacing with the outside world and consolidating public consensus.²⁵

On December 17, 2008, MNDIO office director and chief spokesman Senior Colonel Hu Changming told the *Financial Times* that “China would likely deploy warships to the Gulf of Aden.” On December 20, he stated officially that three vessels would depart in a week’s time. Then, on December 23, Senior Colonel Huang Xueping, MND Secondary Spokesman and MNDIO Deputy Director, convened a news conference at MNDIO’s News Release Office.²⁶ There he and two other PLA representatives stressed that the primary goal of the mission—to safeguard Chinese shipping—represented neither a shift in noninterventionist foreign policy nor a commitment to further blue-water operations. In the words of the director of the Operations Department at PLAN Headquarters, China wants to protect “ships of international organizations [such as the UN World Food Program] that are carrying humanitarian supplies to Somalia.”²⁷ This allows China to shift from being the only permanent

member of the UNSC not to have contributed to international maritime security operations toward becoming a responsible power that makes all types of contributions.²⁸ Of course, as repeated Chinese statements underscore, the central purpose of the mission is to escort Chinese ships. As criminal law researcher Huang Li, who has published one of the few Chinese books available thus far on the deployment, emphasizes, “sending warships on an escort mission is one’s own business, as the country which joins the escort operation is the boss of its own. This is a transition of status from the employee to the boss.”²⁹

Unofficial Explanations. The above rationales are accurate, but incomplete. First, all easier options had been exhausted. Second, Beijing was under mounting popular pressure to act. Third, deploying naval vessels offered a politically-safe opportunity to do what many decisionmakers likely regarded as a logical next step in China’s military development.

The heart of the matter was lack of further options to solve the piracy problem indirectly. According to Huang Li, “It took nearly a whole year to find a solution to this problem.”³⁰ Unable to afford high private security fees, Chinese ships had started to detour around the Cape of Good Hope, raising shipping rates and risking the loss of market share if Chinese merchant ships broke contracts.³¹ This, in turn, risked making China’s government look ineffectual. Preoccupied with the May 12, 2008, Wenchuan Earthquake and the August 2008 Olympics,³² Beijing tried a variety of alternatives to muddle through, but all failed; hence its pursuit of a unilateral approach under a multilateral aegis.

China's 3 decades of involvement in international organizations and a decade of increased military spending present a double-edged sword: They offer more options for safeguarding Chinese interests, but raise expectations among the public at home, and policymakers abroad. China's leadership was undoubtedly concerned about retaining legitimacy in the eyes of its citizens, some of whom expressed in Internet postings increasing frustration at governmental inability to protect Chinese shipping.³³ Reportedly, in mid-October, the PLAN "launched a feasibility study of an operation 'to send troops to Somalia on an escort mission'," and in mid-November, the PLA General Staff Department initiated a related study.³⁴ Unusually rapid and effective interagency coordination between China's Ministry of Transportation, Ministry of Foreign Affairs, and Navy (following an initial meeting between the first two in mid-October 2008) succeeded in laying the groundwork for the counter-piracy deployment,³⁵ these agencies and the Ministry of Commerce reportedly held a joint symposium on December 2.³⁶ Meanwhile, on November 15, 261 students of four PLAN academies aboard the training vessel *Zheng He* participated in an anti-piracy exercise in Southeast Asia. On December 4, Major General Jin Yinan, director of the National Defense University's Institute for Strategic Studies, advocated PLAN participation to "gain experience" both in "fighting piracy" and "carrying out ocean-going quasi-combat missions."³⁷

Although its decisionmaking process appears to be long term and gradual, China's State Council and Central Military Commission (CMC) likely approved the Aden mission in part to exercise the PLAN's growing naval capability. "Apart from fighting pirates, an-

other key goal is to register the presence of the Chinese navy,” states Senior Captain Li Jie, a prominent expert at the Navy Military Studies Research Institute in Beijing. His institute, the PLAN’s strategic think tank,³⁸ and the PLAN more generally,³⁹ had earlier analyzed relevant maritime legal issues and found nothing to prevent such a mission. The relatively limited U.S. response to piracy in the Horn of Africa arguably offered China a particularly useful strategic opportunity in this regard. As Huang Li put it, “to achieve ‘peaceful’ entry into the Indian Ocean, we need[ed] a legitimate cause so that other people could not criticize [us].”⁴⁰

RELEVANT OPERATIONAL DETAILS

Platform Capabilities.

On December 26, 2008, China deployed two South Sea Fleet destroyers – *Wuhan* (DDG-169 052B Luyang) and *Haikou* (DDG-171 Type 052C Luyang-II) – and the supply ship *Weishanhu* (#887 Qiandaohu/Fuchi class) 10,000 kilometers (km) from their homeport in Sanya, Hainan Province. After about 3 months, the destroyer *Shenzhen* and the frigate *Huangshan* were dispatched to replace them, while the supply ship *Weishanhu* remained on station. This second escort fleet conducted operations for about 112 days before being relieved by a third escort fleet composed of the frigates *Zhoushan* and *Xuzhou* and another supply ship, *Qiandaohu*. Three months later, frigates *Ma’anshan* and *Wenzhou* relieved their predecessors and joined *Qiandaohu* in the Gulf of Aden. On March 4, 2010, missile destroyer *Guangzhou* and supply ship *Weishanhu* left Sanya to join missile frigate *Chaohu* in a fifth task force.

The PLAN chose some of its newest, most advanced (and indigenously constructed) vessels and most distinguished, experienced officers and crew to carry out this mission. This suggests that it is serious about using this opportunity to test some of its foremost systems and gain modern seafaring experience. For the first two deployments, the PLAN selected vessels from the South Sea Fleet, closest to the theater of operations. The next two deployments have come from the East Sea Fleet, which suggests a broader effort to expose as many units as possible to new experiences. Beijing reportedly sent large, impressive vessels for four reasons: to withstand difficult sea states, to compensate for lack of overseas military bases, to preclude a “mistaken bombing” of China’s assets à la that of its Embassy in Belgrade in 1999, and to preempt perceptions of subsequent deployment escalation if it had to send major vessels in the future.⁴¹

Consider the first deployment. The flagship *Wuhan*, and even the newer *Haikou* (constructed in 2003), were never previously dispatched this far. Each displace 7,000 tons, have a maximum speed of 30 knots, and can carry a helicopter for patrol and surveillance.⁴² For this mission, both ships embarked a Ka-28 *Helix* from the East Sea Fleet,⁴³ and piloted them with senior colonels with several thousand hours of flight experience.⁴⁴ The selection of East Sea Fleet helicopters to accompany warships from the South Sea Fleet on the initial rotation of the anti-piracy mission was likely due to the fact that the *Helix* is superior platform to the Chinese built Z-9.⁴⁵ *Wuhan* boasts anti-ship and surface-to-air missiles and a close-in weapon system. *Haikou*’s first generation phased-array radar and vertically launched long-range air defense missile system offer the fleet area air defense previously unavailable

to the PLAN. Additionally, the 052B class destroyers (168 and 169) are outfitted to serve as task group command ships; *Wuhan*, though less advanced, reportedly served as the task group flagship because of its “operational tasks” and “arrangement of equipment.”⁴⁶

The 23,000-ton *Fuchi*-class *Weishanhu*, China’s largest supply ship and one of its three newest, has a maximum speed of 19 knots, can carry two helicopters, is armed with eight 37 mm guns, and carries 130 crew members. It was China’s most experienced replenishment ship, having participated in Sino-British Friendship 2007 exercise near the English Channel and Sino-French Friendship 2007 exercise in the Mediterranean.⁴⁷ Table 1 provides further details for vessels deployed in the first four task forces.

Vessel	Hull #	Class	Type	Displacement (tons)	Builder	Laid Down	Launched	Commissioned	Home Port
Wuhan	169	Luyang I (052B)	destroyer	7,000	Jiangnan Shipyard, Shanghai	2001	September 9, 2002	July 18, 2004	Sanya, SSF
Haikou	171	Luyang-II (052C)	destroyer	7,000	Jiangnan Shipyard, Shanghai	November 2002	October 23, 2003	July 20, 2005	Sanya, SSF
Shenzhen	167	Luhai (051B)	destroyer	6,100	Dalian Shipyard	July 1996	October 16, 1997	January 4, 1999	Sanya, SSF
Huangshan	570	Jiangkai II (054A)	frigate	3,900	Huangpu Shipyard, Guangzhou	2006	March 18, 2007	2008	Sanya, SSF
Zhoushan	529	Jiangkai II (054A)	frigate	3,900	Hudong-Zhonghua Shipyard, Shanghai	2006	December 21, 2006	2008	Zhoushan, ESF
Xuzhou	530	Jiangkai II (054A)	frigate	3,900	Huangpu Shipyard, Guangzhou	2005	September 30, 2006	January 29, 2008	Zhoushan, ESF
Ma'anshan	525	Jiangkai I (054)	frigate	4,053	Hudong-Zhonghua Shipyard, Shanghai	Late 2002	September 11, 2003	February 18, 2005	Zhoushan, ESF
Wenzhou	526	Jiangkai I (054)	frigate	4,053	Hudong-Zhonghua Shipyard, Shanghai	N/A	30 November 2003	26 September 2006	Zhoushan, ESF
Weishanhu	887	Fuchi	replenishment	23,000	Huangpu Shipyard, Guangzhou	N/A	July 1, 2003	April 2004	Sanya, SSF
Qiandaohu	886	Fuchi	replenishment	23,000	Hudong-Zhonghua Shipyard, Shanghai	N/A	March 2003	April 2004	Zhoushan, ESF

Table 1: Vessels Deployed in the First Four Task Forces.⁴⁸

Rules of Engagement.

Following the careful interagency coordination and PLAN legal preparations noted above, Beijing has reaffirmed the practical reasons for the deployment, and stressed that China has explicit UN authorization for its presence in the region. The UN Convention on the Law of the Sea of December 10, 1982, provides specific legal authority for the international effort to fight piracy outside a coastal state's territorial sea. The Security Council, necessarily with Beijing's support, has passed four relevant resolutions under Chapter VII of the UN Charter (authorizing states to take "all necessary measures"): 1816, 1838, 1846 (on December 2, 2008), and 1851 (on December 16).⁴⁹ Affirmed under that umbrella, UNSC resolution 1846 authorizes participating states to engage pirates within the 12-nautical mile territorial waters off the coast of Somalia.⁵⁰

Resolution 1851, passed unanimously by the UNSC, authorizes international navies to pursue pirates from the Gulf of Aden to the shores of Somalia and—if conditions warrant—to engage in related activities "in Somalia" itself.⁵¹ Beijing also voted in favor of Resolution 1816, which authorizes members of the international community to "enter the territorial waters of Somalia for the purpose of repressing acts of piracy and armed robbery at sea."⁵² But China's government, having obtained from Mogadishu's ambassador to China, Ahmed Awil, a specific request to participate,⁵³ emphasized that international assistance "should be based on the wishes of the [Somali] Government and be applied only to the territorial waters of Somalia."⁵⁴ To build on this somewhat exceptional sense of legitimacy with Chinese characteristics, Bei-

jing's official news media constantly publishes appreciation from Somali officials and civilians.⁵⁵

The PLAN itself has pledged a cautious, reactive approach limited to defense of its ships and any vessels under their escort. The explicit objective is to escort Chinese vessels (and those of other nations on a case-by-case basis) and thus deter pirates from attacking them in the first place, not to actively search for pirates and engage in combat with them. PLAN forces will not even "take the initiative to search for captured vessels and personnel at sea and carry out armed rescues."⁵⁶

Moreover, according to Senior Colonel Ma Luping, director of the navy operational bureau under the headquarters of the General Staff, PLAN forces will not normally enter another nation's national territorial seas (within the internationally recognized 12 nautical-miles limit) to chase pirates.⁵⁷ At a press conference accompanying the departure of the Chinese destroyer contingent on December 26, 2008, the high-ranking lead commander of the first deployment, South Sea Fleet Chief of Staff Rear Admiral Du Jingcheng, said the ships would "independently conduct escort missions" and not land on Somali shores.⁵⁸ According to a senior Chinese military official: "For us to use force is a very complex matter . . . it is not just a simple question based on an operational requirement. . . . There are political questions – and these are not issues dealt with by military commanders alone. Our warships off Somalia are very well aware of this. We are fully prepared to use force, but we do not take that step lightly."⁵⁹ It thus seems clear that China wants to avoid using force in another nation's land or territorial sea⁶⁰ to avoid setting a precedent that might later be used against it. Huang Li emphasizes that, according to

Article 107 of UNCLOS, “warships, military aircraft, or other aircraft or vessels carrying clear markings of service for a government may pursue, attack, and detain all pirate ships. . . .”⁶¹ However, there have not been any signs yet that the PLAN is permitted even to board and inspect suspicious ships. Beyond basic escort duties, PLAN vessels have pursued two of the following three modes of emergency operation:

1. *On-call support*: “Rapid and flexible actions” that the task force takes after receiving a request for support from vessels passing through high-risk zones or anticipating pirate attacks. If the PLAN detects a “suspicious vessel,” it will deploy a helicopter for surveillance and reconnaissance. Only after that will the Chinese ship(s) approach the vessel in question.

2. *Pirate deterrence*: After the fleet receives emergency rescue signals from vessels under attack but not yet controlled by pirates, PLAN platforms take air and sea deterrence measures. This typically entails helicopter deployment – with potential for engagement, at least in theory. It can also involve having a PLAN vessel approach the pirates, if available and close enough to arrive in time. In the event that pirates are seizing a ship and the PLAN vessels are close enough to stop it, the fleet commander will give orders based on his evaluation of the situation.

3. *Vessel rescue*: sustained pressure and rescue actions that the fleet takes when it receives calls for help or instructions that pirates have seized vessels. In the unlikely event that pirates attack, the PLAN ships with their overwhelming firepower – which they practice regularly at sea – will engage in “self-defense.” Underscoring this defensive posture to an extreme, Chinese Rear Admiral Xiao Xinnian stressed: “[If] our naval vessels are ambushed by pirate ships, we will resolutely fight back to protect our own safety.”⁶²

These very cautious rules of engagement (ROE) suggest that Beijing wants to support the efforts of the UN, but does not want to have its forces subordinate to (or appear subordinate to) those of any other nation; that it wishes to avoid political and legal issues associated with engaging pirates directly if possible; and that it probably wishes to avoid capturing them for fear of the responsibility involved, the lack of viable legal options, and the possibility of negative political ramifications internationally, particularly in the Muslim world. Huang Li adds that killing pirates could lead to harming of crew members and targeting of Chinese vessels for revenge, neither of which is currently a problem.⁶³ To the extent that Beijing takes risks in any of these areas, it would almost certainly be to defend crewmembers of a Chinese vessel in the absence of other options.

Deployment, Operations, and ROE Employment.

The PLAN offers three methods of protection against pirates: “area patrol,” “accompanying escort,” and “on-ship protection.” Area patrol, the method least-used (at least as a discrete approach), involves monitoring relevant zones. PLAN has maintained two rendezvous points 550 nautical miles apart, at 100 nautical miles north of Yemen’s Socotra Island and 75 nautical miles southwest of Port Aden, and seven patrol zones along the main shipping route in the sea area east of the Gulf of Aden.⁶⁴

Accompanying escort, in which PLAN ships travel next to or near groups of commercial vessels, is by far the most-used method. Through the China Ship Owners’ Association, Beijing now accepts applications from ship owners in mainland China, Hong Kong, Macau,

and Taiwan for the PLAN to escort their vulnerable ships through the Gulf of Aden.⁶⁵ Foreign ships may apply on a case-by-case basis. The Ministry of Transportation (MoT), which is subordinate to the State Council, processes the applications, determines ship-specific requirements, and suggests a method of escort to the PLAN. After the PLAN determines the proper plan, the MoT then guides the ships to be escorted to the predetermined location where they are to meet the relevant PLAN vessel(s).⁶⁶

China has already escorted a wide variety of Chinese, and even some foreign, ships in an area west of longitude 57 degrees east and south of latitude 15 degrees north.⁶⁷ Even in the first deployment, *Wuhan* and *Haikou* worked around the clock and could escort multiple ships simultaneously in opposite directions.⁶⁸

In response to initial problems with commercial ships not adhering to the details of escort procedures during the first month, the PLAN now offers pre-scheduled group escorts. Starting after the 2009 Spring Festival, escort was offered based on marine traffic conditions, as determined by PLAN and MoT research. Now this has become routinized, like a train schedule. Announcements posted on the China Ship Owners' Association's website before the 15th of each month announce "fixed escort times" (e.g., weekly) and merchant ships must make arrangements accordingly.⁶⁹ The PLAN must be notified a week in advance regarding ships which are slower than 10 knots/hour or have other special requirements.⁷⁰

The configuration of the escort formation is generally determined by the number of merchant ships to be escorted. They are divided into one or two columns, organized to facilitate communication, and separated at a standard distance. For single-column escort, the

PLAN warship(s) will maintain similar speed and course from a position outside the column. For double-column escort, a single warship would operate on the inside, whereas two warships would each take one side. Occasionally one ship will be relieved by another coming in the opposite direction, as in a "relay race." Escort columns can incorporate more than a dozen ships and extend over a dozen km.

To save fuel and wear and tear on PLAN vessels on routes that are less traveled, with ships that travel fast enough to better evade pirates, the PLAN relies on embarked special forces and helicopter operations. On-ship protection involves stationing special forces personnel on one or more vessels in a group of civilian ships. Here the PLAN draws on its 70-90 highly trained Marine Corps Special Operations Forces. Building on earlier land-based training, during transit to the Gulf of Aden, members of a special force unit aboard the warships carry out anti-piracy training with a ship-borne helicopter, from which they rappel onto the deck to simulate landing on hijacked or pirate vessels. The helicopters also practice nighttime landing operations at sea, a new area for the PLAN.

The special forces are sufficient to protect at least 7 convoys of merchant ships. The typical procedure is to use helicopters to embark 5-7 special forces on the first and last ships of a convoy. With a range of up to 2,000 meters, their deck-mounted grenade launchers enable them to destroy pirate boats before the pirates could threaten them. They are also equipped with a variety of shorter range weapons, including Type-56 assault rifles, QBZ-95 automatic rifles, and QBU-88 sniper rifles, as well as infrared night-vision equipment. In emergencies, civilian crewmembers may be allowed to use some of the weapons.⁷¹

ENCOUNTERS WITH PIRATES

While the PLAN has sought to minimize contact with pirates during all three types of operations, it has encountered, and demonstrably deterred them, on several occasions. Of all PLAN platforms, helicopters have made the closest and most numerous encounters. On January 18, 2009, *Tianhe*, a vessel owned by China Ocean Shipping Company (COSCO), radioed to *Wuhan* that two speedboats were chasing it and—following suspicious communications breakup—requested immediate assistance. Task Group commander Admiral Du Jingcheng ordered the ships to assume battle formation, with helicopters readied. *Wuhan* approached the speedboats, chasing them away. The fleet received a similar distress call earlier that day from a mainland cargo ship, which evaded speedboats without needing PLAN assistance.⁷² On February 6, seven embarked special operations forces organized crew members of *Oriental Oil Explorer 1* against an oncoming pirate speedboat, fired three warning shells, and prepared to fight when the speedboat, deterred, sped away.⁷³ On February 24, *Lia*, a Liberia-flagged Italian merchant ship, had to leave a *Haikou*-escorted formation to repair an engine. Almost immediately, in response to two rapidly-approaching speedboats, it requested help from *Haikou*. *Haikou* dispatched a helicopter with three special forces and a photographer. The helicopter fended off the speedboats by circling and firing two signal flares at each of them.⁷⁴ A similar procedure, this time using *Huangshan* as well, was used on July 13 to protect Liberian oil tanker, *A. Elephant*, and Maltese merchant ship, *Polyhronis*.⁷⁵ On August 6, *Zhoushan* “expelled several suspected pirate ships and

guarded the Chinese merchant ship *Zhenhua 25*.”⁷⁶ A further helicopter deterrent mission on November 12 also succeeded, even though pirates had already fired and attempted to board COSCO vessel *Fuqiang*, injuring two of its crew in the process.⁷⁷

THE DEXINHAI INCIDENT: LOGICAL RESULT, OR EVIDENCE OF ONGOING LIMITATIONS?

A dramatic incident has called into question the extent to which Beijing can, and will, use naval means to safeguard civilian ships. *Dexinhai*, a Chinese-flagged bulk carrier which had failed to register according to Chinese procedures, was pirated 700 NM east of Somalia on October 19, 2009. Early rumors that *Zhoushan* and *Xuzhou* were steaming to its rescue⁷⁸ gave way to reports that as of November, *Dexinhai* and its 25 crew members were trapped in the pirate stronghold of Hobyso on the central Somali coast. Liang Wei, South Sea Fleet deputy chief of operations, reportedly explained that *Zhoushan* and *Xuzhou* had been too far away (over 1,000 nautical miles, according to another source)⁷⁹ to reach the pirates during the 3 days they piloted *Dexinhai* to shore. Apparently, the PLAN did convene an emergency meeting on October 21.⁸⁰ Fudan University professor Zhang Jiadong predicted that because the priority is to save lives, not fight pirates, China would establish communications with Somali government and warlords; approach the site with naval ships for deterrence and control; and pay the pirates to release the hostages.⁸¹

China’s official press seemed to convey a sense of relief when *Dexinhai* entered Somalia’s territorial waters because it provided a rationale for inaction. While UNSCR 1846 and 1851 authorize operations within So-

malia's territory to include land, waters, and airspace, they were passed by the Security Council unanimously. This highlights the cautious approach that Beijing is taking although to be fair to the Chinese, other nations are taking a fairly conservative approach as well. Anthony Wong Dong, president of the International Military Association in Macau, offers an additional Chinese consideration: "If Beijing fails to save the Chinese crew, it will set a bad example for Chinese laborers who are working in energy-rich countries."⁸² Huang Li adds more generally that China's deployments are "conducted under the watchful eyes of the whole world and any small error will be magnified over a hundred times . . . it will be an irretrievable loss if one hostage is injured or dead."⁸³ One Chinese analyst sees the incident as revealing not just political caution *per se* but also deficiencies in Chinese ISR, force scale, quick response, and calls for more robust "far seas presence," as well as overseas bases.⁸⁴

Chinese Shipowners' Association secretary general Zhang Zuyue has reported that Chinese representatives were engaged in secret negotiations with the pirates.⁸⁵ Meanwhile, the Chinese task force "enhanced helicopter patrols, observation, lookout, guard, and patrols by small boats."⁸⁶ On December 28, 2009, *Dexin Hai* and its crew were released after a reported \$4 million ransom payment. While this caution is understandable, Beijing's apparent pursuit of a separate peace with pirates—without seeking publicly to confer with other maritime stakeholders—risks leaving other vessels worse off.

EQUIPMENT, PERSONNEL, AND LOGISTICS SUPPORT

At-Sea Replenishment.

In what might be considered the linchpin of the entire mission, the PLAN handled the logistics and supply requirements associated with the counterpiracy deployments through a combination of underway replenishment and port visits (see Table 2).

Port	Date	Vessel	Vessel Type	Purpose/Details
Port Aden, Yemen	February 24, 2009	<i>Weishanhu</i>	replenishment	replenishment
	April 25, 2009	<i>Weishanhu</i>	replenishment	replenishment
	July 23, 2009	<i>Weishanhu</i>	replenishment	replenishment
Port Salalah, Oman	June 21- July 1 2009	<i>Shenzhen</i>	destroyer	rest and replenishment
	June 21- July 1 2009	<i>Huangshan</i>	frigate	rest and replenishment
	June 21- July 1 2009	<i>Weishanhu</i>	replenishment	replenishment
	mid-August 2009	<i>Zhoushan</i>	frigate	rest and replenishment
	mid-August 2009	<i>Xuzhou</i>	frigate	rest and replenishment
	mid-August 2009	<i>Qiandaohu</i>	replenishment	rest and replenishment
	Kochi, India	August 2009	<i>Shenzhen</i>	destroyer
Karachi, Pakistan	August 5-7, 2009	<i>Huangshan</i>	frigate	three-day visit; joint exercises
Karachi, Pakistan	August 5-7, 2009	<i>Weishanhu</i>	replenishment	three-day visit; joint exercises

Table 2. Port Visits through August 2009.

First Deployment: Three PLAN vessels (*Wuhan*⁸⁷ and *Haikou*⁸⁸ destroyers and the replenishment vessel, *Weishanhu*⁸⁹), commanded by Rear Admiral Du Jingchen and his deputy Rear Admiral Yin Dunping,⁹⁰ departed Sanya on December 26, 2008, and arrived in waters off of Somalia on January 6, 2009. On December 30, 2008, transiting the Strait of Malacca, *Weishanhu*

performed its first at-sea replenishment.⁹¹ *Wuhan* and *Haikou* spent 124 days at sea before returning on April 28 but did not make any port visits. *Weishanhu* made two brief replenishment stops at Port Aden, Yemen (February 24 and April 25).

Second Deployment: In April 2009, a destroyer and a frigate (*Shenzhen* and *Huangshan*), under the command of Rear Admiral Yao Zhilou, replaced the first two combatants. They conducted separate rest and replenishment port visits at Port Salalah, Oman, between June 21 and July 1, 2009. Resupply vessel *Weishanhu* made one more replenishment stop at Port Aden on July 23, as well as rotating Rest and Replenishment port visits to Port Salalah, Oman, between June 21 and July 1. Rotation ensured that five groups of 54 merchant ships were escorted during this time. This first ever shore rest for crew involved with the anti-piracy missions entailed group shopping and sightseeing and recreational activities with civilians.⁹² On its way home in August, *Shenzhen* conducted a 4-day port visit in Kochi, India. The crew visited the Southern Naval Command's training facilities and interacted with their Indian counterparts.⁹³ Concurrently, *Huangshan* and *Weishanhu* visited Karachi, Pakistan, on August 5-7, 2009, to engage in joint exercises with Pakistan's navy simulating a variety of combat situations.⁹⁴ The task force returned to its home port on August 21.⁹⁵

Third Deployment: Combatants *Zhoushan* and *Xuzhou*, along with replenishment vessel *Qiandaohu*, left Zhoushan, Zhejiang Province on the morning of July 16, 2009, under ESF deputy commander Wang Zhiguo.⁹⁶ They relieved the second trio on August 1.⁹⁷ All three vessels made alternating Rest and Replenishment port visits to Port Salalah, Oman, in mid-August.⁹⁸ Like *Weishanhu*, *Qiandaohu* has significant medical facilities.⁹⁹

Fourth Deployment: On October 30, 2009, missile frigates *Ma'anshan* and *Wenzhou* left Zhoushan under the command of the East Sea Fleet Deputy Chief of Staff Qiu Yuanpeng to join replenishment vessel *Qi-andaohu* in the Gulf of Aden. The task force has two helicopters and a crew of more than 700, including a special forces unit.¹⁰⁰

The initial destroyer deployment made PLAN history in numerous ways. It was:

- The first time multiple naval service arms, including surface vessels, seaborne aircraft, and special forces, were organized to cross the ocean and execute operational tasks;
- The first long-term ocean task execution that did not include port calls throughout its entire course, breaking records in continuous time underway and sailing distance of a PLAN vessel formation and in flight sorties and flight time of seaborne helicopters;
- The first execution of escort tasks with the navies of multiple countries in the same sea area and holding of shipboard exchanges and information cooperation;
- The first sustained, high-intensity organization of logistical and equipment support in unfamiliar seas far from coastal bases, accumulating comprehensive ocean support experience;
- The first organization of base-oriented logistical support using commercial methods in a foreign port;
- The first time civilian vessels delivered replenishment materials for a distant sea formation;
- The first all-dimensional examination of multiple replenishment methods, including un-

derway, alongside connected, helicopter, and small vessel replenishment;

- The first long-range video transmission of medical consultations and humanitarian assistance such as medical care for casualties from other vessels conducted on the ocean.
- In addition to these, this first escort formation set a record of 61 days for the longest sustained support of a formation at sea, without calling at port for replenishment, and also set a record for the longest number of days of sustained support of a combatant vessel at sea without calling at port.¹⁰¹

The most significant sign from the Gulf of Aden mission is that the PLAN was able to keep the ships underway and steaming for this length of time.¹⁰² Previously, PLAN ships transiting to the AMAN-07 and AMAN-09 exercises had refueled in Colombo, Sri Lanka, but China had little other experience on which to draw. As of November 2009, however, the replenishment vessels have been able to supply food and water, as well as ammunition, on smooth and even somewhat choppy seas. Fuel and spare parts are supplied both in this manner and via port calls; the latter is true for personnel rotation.¹⁰³

Little information is available on maintenance and repairs, which are essential on a taxing mission of this duration. The situation appears to be far better than that during the 2002 global circumnavigation, when German technicians had to be flown in to repair imported MTU diesel engines on the Type 052 destroyer *Qingdao* (DDG 113);¹⁰⁴ this time, the PLAN even helped a civilian vessel fix its own engine problems. According to Senior Colonel Xie Dongpei, deputy di-

rector of the PLAN headquarters general office, vessels deployed for anti-piracy operations would go to Karachi, Pakistan, for major repairs if needed.¹⁰⁵

Replenishment progress builds on China's developing combined civilian-military logistics system.¹⁰⁶ Here, China's commercial sector is already a tremendous asset. Two of China's top shipping companies, China Shipping Development and China Ocean Shipping (Group) Company (COSCO), have established several logistics-based joint operations with power and mining companies in China.¹⁰⁷ China Ocean Shipping and China Shipping Container Lines have also launched their own logistics operations, which support their mainstream shipping ventures. The West Asia division of COSCO Logistics, which has been rated China's biggest logistics firm in revenue terms 5 years running, has played a major role in supporting the current missions.¹⁰⁸ Smaller companies such as Nanjing Yuansheng Shipping Co. Ltd. have also been used.¹⁰⁹

Satellite Tracking and Communications.

Unprecedented and innovative use of satellite communications has been a major highlight of China's deployment. While the United States and most Western (as well as the former Soviet) navies have engaged in related operations for years, this is a new and important step for the PLAN. Satellite communications has played some role in previous counterpiracy efforts. According to Director-General Ju Chengzhi, International Cooperation Department, MoT, on December 17, 2008, the captain of fishing vessel *Zhenhua 4* requested the MoT's Maritime Search and Rescue Center's assistance via maritime satellite. There, the

rear command team directed *Zhenhua 4* to engage in self-defense, then secured the assistance of Malaysian warships via the International Maritime Bureau's anti-piracy center.¹¹⁰ However, there has also been concern that unsecure communication via maritime satellite in the past meant that "secrets were divulged in PLA exercises"; subsequent use of the *Beidou* navigation satellite system's "short messaging" and "time service and position locating functions" has "solved the problem of secrets being divulged in communication to a certain extent."¹¹¹

Now, apparently for the first time, China is relying on its own capabilities from start to finish. From the first counterpiracy deployment, PLAN Control Center (海军指挥中心) and MoT's China Search and Rescue Center (中国海上搜救中心) track all relevant Chinese merchant ships, on which the MoT has installed devices to support a maritime satellite-based ship movement tracking system (船舶动态跟踪系统). Supported by freshly developed software, this permits "all-dimensional tracking (全方位跟踪)" and video-based communications "at all times."¹¹² Here Beijing's ability to locate PRC-flagged vessels clearly benefits from the China Ship Reporting (CHISREP) System, which requires "all Chinese-registered ships over 300 GT engaged in international routes" to report position daily to the PRC Shanghai Maritime Safety Administration.¹¹³ At least one drill has been conducted, and MoT is confident that "sufficient preparations have been made."¹¹⁴ Rear Admiral Yang Yi was paraphrased as saying that communications between ships of different nations should not be difficult: "Surface ships are visible and usually tracked to avoid collisions. They are sometimes monitored by both satellite and surveillance aircraft."¹¹⁵

The most dramatic innovations in satellite applications are in PLAN operations themselves. At a April 29 symposium to welcome the first deployment home, General Political Department Director and CMC member Li Jinai praised the PLAN for “active exploration of the new ‘shore and ship integrated’ political work mode.” This has entailed shifting from transmission of political materials via “plain code telegraph” (明码电报) (a process that once took as long as an entire day during a month-long deployment) to more sophisticated satellite communications. The deployment witnessed many other firsts, including “a communication satellite [being] used to provide 24-hour coverage for the oceangoing formation . . . shipborne helicopters [being] used to provide surveillance on battlefield situations, and . . . the formation [being] connected to the Internet.”¹¹⁶ A web-based IP communication network was developed to allow crewmembers to call any land line or cell phone in mainland China.¹¹⁷

In 2002, the PLAN sent *Luhu*-class guided-missile destroyer *Qingdao* (#113) and composite supply ship *Taicang* (#575), and 506 crew members on a global circumnavigation. During their 132-days, 33,000 kilometers voyage, “the Navy utilized telecommunications technologies for the first time to send domestic and international news to the formation.” The PLAN refers to this new information transmission method as “cross-ocean ‘information supply’” (“跨越大洋的 ‘信息补给’”).

For the December 2008 mission, Wu Shengli and Liu Xiaojiang, PLAN Commander and Political Commissar, demanded “comprehensive coverage, all-time linkage, and full-course support” (全面覆盖, 全时链接, 全程保障). The PLAN Political Department worked with the PLAN Headquarters Communications De-

partment and the State Information Center to improve the “shore and ship integrated” political work platform that integrates a land base information collection and transmission system, an information integration and distribution system, a shore-to-ship information wireless transmission system, and an information terminal receiving system. They also sent technical personnel to Sanya to conduct satellite receiving equipment debugging, system installation, and personnel training on the three combat ships that were about to set sail for escort operations. Moreover, they specially developed and improved a total of seven information processing software programs, which can send text, images, as well as video and audio documents quickly.¹¹⁸ PLAN vessels support command and coordination during escort missions by “releasing for use high-frequency Chinese and English channels,” and maintain constant communication with escorted vessels “through emails and satellite faxes.”¹¹⁹

Communicating more effectively at sea, in part by increasing reliance on space-based assets, appears to be a major step for the PLAN. This could allow a PLAN task force commander to act more independently of other navies in a tense political situation, in part by receiving clear real time directions from civilian authorities in Beijing.

Coordination with Other Militaries.

Most of the 14 nations that have sent ships to conduct counterpiracy operations in the Gulf of Aden region do so under five types of Combined Maritime Forces (CMF): two multi-national ones, and those from the North Atlantic Treaty Organization (NATO) and the EU, which coordinate with their multina-

tional counterparts. Combined Task Force 151 (CTF-151) was established on January 8, 2009, under U.S. leadership, specifically to combat piracy in the Gulf of Aden.¹²⁰ The Commander of CTF-151, Rear Admiral Terry McKnight, has indicated that he will continue to recruit partner nations to expand the current 14-nation, 20-ship effort.¹²¹ A separate German-led coalition of NATO and EU allies, along with other willing participants, conduct Maritime Security Operations in the region under the broader charter of CTF-150.

From the outset, Beijing has been “ready to exchange information and cooperate with the warships of other countries in fighting Somalian pirates,” according to MNDIO deputy spokesman Huang Xueping.¹²² Admiral Du Jingcheng, commander of the first deployment, said his forces would “not accept the command of other countries or regional organizations,” but rather “facilitate exchanges of information with escort naval vessels from other countries.”¹²³ There has been gradual increase in communications with vessels from the United States and over 20 other countries and several shipboard exchanges of commanding officers and CTF 151 staff.¹²⁴ Email exchanges have increased markedly over time, with over 300 exchanged with foreign vessels during the first deployment alone. The PLAN uses a Yahoo email account and “unclassified chat” on an instant messaging system.¹²⁵ Methods for sea and air coordination and intelligence sharing have been exchanged, with exchange of relevant videos and photos, as well as best practices on identifying and handling pirate vessels discussed.¹²⁶ According to a U.S. destroyer commanding officer in the Gulf of Aden: “[We] talk with the Chinese destroyers by VHF radio to coordinate search patterns and to exchange information on suspicious ships. [We] also have co-

ordinated Chinese helicopter flight operations with the ScanEagle launches and recoveries. The exchanges are professional, routine and positive. . . .”¹²⁷ On September 10, 2009, China began its first ever joint global security action with Russia on the world stage. All three vessels from the PLAN’s third deployment will work with Russian vessels similarly deployed. As part of joint Blue Peace Shield 2009 exercises, the two navies have conducted “tests of communications links, simulated missions to identify ships from helicopters, coordinated resupply efforts, and live firing of deck guns.”¹²⁸

CLOSER COOPERATION?

Despite shared goals, China—like India and Russia—has yet to join any of the multinational counter-piracy efforts.¹²⁹ Instead, starting in mid-October 2009, Beijing made an official proposal that waters around the Horn of Africa be apportioned into discrete zones in which participating nations exercised responsibility for security to better cover the unexpectedly broadening of Somali pirate attacks beyond the 60th meridian in the more dangerous waters to the south and east.¹³⁰ In November, China convened a conference to promote the proposal. Despite extremely positive overtures in Shared Awareness and Deconfliction (SHADE) meetings and other venues and optimistic expectations from EU officials and Commodore Tim Lowe, deputy commander, CTF-150, China appears to have “deftly parried appeals . . . to lead” existing CTF initiatives. At the same time, at least one Chinese analyst states that while China’s proposal would reduce costs and increase effectiveness, relative gains concerns on the part of other nations may well preclude its implementation.¹³¹

So why is Beijing making this effort? Rear Admiral Yin Zhuo, director of a naval expert committee, explains that China lacks formal relations with NATO.¹³² Closer cooperation “would involve the sharing of intelligence codes, which is a sensitive military and political issue.”¹³³ There are several broader potential explanations for China’s hesitation: lack of experience and preparation, sensitivity regarding sovereignty, and concerns about revealing Chinese capabilities (or lack thereof). For example, there appear to be some Chinese concerns that their vessels will be subject to scrutiny. Rear Admiral Yang Yi states that “some secretive reconnaissance does take place”; Sr. Captain Li Jie of the Naval Research Institute adds that “As long as all parties keep their activities to a minimum, military powers will not engage in disputes.”¹³⁴

The author is concerned that the “patrol zone” approach, if adopted, is unlikely to be effective. First, dividing the sea among different nations evokes a sort of “Cold War” mentality, just as post-war Germany was divided into different sectors that later led to a painful and prolonged national division. Second, some sea areas are much busier than others, so this would result in an inefficient distribution of forces. Third, some nations navies may be more capable and/or experienced than others, so there is a risk that some areas might be less-secured than others. This could be very difficult to solve, as it might be very difficult for any nation to acknowledge that its forces were not able to perform adequately. Fourth, such a “distributed unilateral” approach seems regrettable when there is sufficient support in the international community for a genuine “cooperative multilateral” approach.

For all these reasons, a far more effective approach would be to support the truly cooperative Combined Task Force-151. CTF-151 has been led by a Pakistani

Admiral, so it is a genuinely multilateral initiative. Unlike other approaches, CTF-151 offers the flexibility needed to combat pirates: it allows for deployment of assets to sea areas where they are most needed, and withdrawal of assets from areas where they are not needed. At least 10 of the 14 nations that have deployed vessels to fight piracy in the Gulf of Aden have participated in CTF 150 and/or CTF-151; this is the vast majority. Perhaps most importantly, it meets general principles for cooperation with the United States in multilateral frameworks, as outlined by Rear Admiral Yang Yi: "all activities should be strictly within the framework of U.N. authorization and consistent with international laws; the sovereignty and territory of other countries must be respected and the use of force in order to intervene in a country's affairs shall be avoided; the target of the activity should be non-traditional security threats . . . ; efforts should be made to increase mutual understanding and promote deeper cooperation. . . ." ¹³⁵ With all these advantages, such an approach is widely accepted and is worthy of careful consideration. The United States and other participating nations would certainly welcome the PLAN into CTF-151.

What, then, are the prospects for China joining CTF-151 or a related cooperative action? One academic and retired PLA officer suggested optimistically that the United States publicly invite China to join CTF-151. ¹³⁶ But another individual of similar background was more measured in his assessment:

China knows that the U.S. is willing to lead, and the PLAN is prepared operationally, but China is not ready politically. The overall political climate is not ready: there are still misunderstandings and mistrust resulting from many issues, especially Taiwan. Differences in po-

litical systems and ideology are at the very roots of the problem.¹³⁷

This individual believed that “anti-piracy cooperation on the high seas should be separated” from these issues, but that there were still many “hardliners” who disagreed.¹³⁸ In Huang Li’s view, if China joined CTF-151,

the naval commander of China has the chance to be the commander of a few dozen warships from various countries, including those of the sea powers of the day. In this way, [he] will not only develop ability to direct the concerted actions of large-sized squadrons of many countries, but also gain the chance of directly communicating and cooperating with the U.S. Navy. Of course, when not serving as the commander of the combined force, we also need to accept the directions of others, and that may be something which we are most unwilling to do.¹³⁹

REACTIONS TO THE MISSION

Responses to the mission both at home and abroad appear to have exceeded the expectations of China’s leadership and analysts. For the PLA, for which these dimensions are intimately connected, this is particularly good news. As a party army, it must rely to an unusual degree on the support of both China’s increasingly sophisticated and informed public—who have been disenchanted by the PLA’s involvement in government corruption and crises since the 1980s—and its civilian leaders, who must grapple increasingly with how other nations view China’s rapid military development even as they count on the PLA to safeguard their rule and defend the nation’s security interests.¹⁴⁰

International.

Surveying relevant academic and media sources, as well as interviews with Chinese interlocutors,¹⁴¹ suggests that foreign responses to the missions were far more encouraging than many expected. One Chinese source does see a “China threat theory,” and questions the need for warships to address the piracy issue.¹⁴² But the vast majority of assessments are far more positive. Fudan University scholar Shen Dingli states that “China’s ‘harmonious diplomacy’ has been well received by countries in the region.”¹⁴³ According to a mainland-owned Hong Kong newspaper, “the current expedition by Chinese naval vessels to Somalia has not stoked the ‘China threat theory’ in the West; quite the contrary, China is being seen as a ‘responsible global player’.”¹⁴⁴ Two professors from Lanzhou University’s Central Asia Studies Institute have categorized piracy, with terrorism, as collective evils that a great power like China must oppose.¹⁴⁵

Domestic.

The Chinese public has expressed great pride in the missions’ success. PLA analysts have seized on this precedent to call for relevance to other military operations. Many suggest that such missions should increase in the future, and that therefore better platform capabilities, and even improved access to overseas port facilities, are needed. Major General Peng Guangqian (Ret.), who played a significant role in shaping PLA strategy as an adviser to China’s powerful CMC and Politburo Standing Committee, states that deploying to Somalia will teach the PLAN how to interoperate with other navies.¹⁴⁶ Major General

Zhang Zhaoyin, deputy group army commander, Chengdu MR, argues that the PLA should use missions other than war to increase warfighting capabilities.¹⁴⁷

PLA(N) Assessments.

On May 25-27, 2009 the PLAN used the occasion of the first group's return to convene a high-level conference to assess the mission. Admiral Wu Shengli, PLAN Commander, proclaimed it a success, which "rendered a satisfactory answer to the party and the people, and won extensive praise at home and abroad." He stated that such missions should become "a routine function of the navy," and called for "further raising the Navy's capability of performing missions in the open ocean."¹⁴⁸

China is attaining a new level of blue-water experience with a mission that requires rapid response, underway replenishment, on-station information-sharing, and calls in foreign ports to take on supplies and engage in diplomacy. Sending an 800-member crew surface action group five time zones away, with 70 special forces embarked and combat contingencies possible, presents unprecedented challenges and opportunities.¹⁴⁹ PLAN personnel continue to learn new techniques, test their equipment, and can be expected to advocate improvements upon their return.

This is likely to catalyze breakthroughs in logistics, intelligence, and communications. Such routine operations as at-sea replenishment will allow Chinese sailors to develop best practices for use in future operations. According to a "Professor Zhang" at China's National Defense University, reportedly a senior PLAN figure, "It is also a very good opportunity to rehearse sea rescue tasks and telecommunication with

other military forces.”¹⁵⁰ The value of air support is becoming clear, perhaps accelerating prospects for Chinese deck aviation development (e.g., ships that can accommodate larger numbers of helicopters as well as an increased number of shipboard helicopters): “The experiences of the naval forces of other countries show that the helicopters carried onboard the naval vessels and small-caliber artillery systems will play an important role.”¹⁵¹ Even more important, the Aden deployment opens up new ideas and discussions that were unthinkable in PLA even 1 year ago, such as the advocacy of overseas bases.

Although the deployment represents a breakthrough for the PLAN, the amount of time each of the escort fleets can spend in the area is constrained by logistics and supply limitations. This mission has therefore been viewed by some Chinese strategists as insufficient to safeguard Beijing’s growing maritime interests. According to PLA Air Force (PLAAF) Colonel Dai Xu, “The Chinese expeditionary force in Somalia has been attracting a lot of attention from around the world, but with only a single replenishment oiler, exactly how much long-term escort time can two warships provide for commercial vessels from various countries?”¹⁵² As such missions become more common place, China will need to carry them out in wider areas, at lower costs, and over longer periods of time. According to Dai, “moves toward establishing an overseas base are a logical extension of this line of thinking.” Similarly, Senior Captain Li Jie, a strategist at the PLAN’s Naval Research Institute, has recommended establishing a supply and support center in East Africa to facilitate PLAN operations in the region. Li argues that the setting up a support center in the area is a real possibility, given that the PLAN has already set the precedent of conducting resupply and

maintenance activities in African ports and China has very good relationships with some countries in the region¹⁵³ (e.g., Pakistan, Bangladesh, and Sri Lanka).

Future Equipment, Personnel, and Logistics Capabilities.

Now that the PLAN has begun moderate blue water deployments in the form of counterpiracy missions, what are its prospects for developing power projection capabilities by 2020, the projected end of Beijing’s “strategic window of opportunity,”¹⁵⁴ and beyond? Broadly speaking, at least theoretically, the PLAN’s future force posture may progress along a continuum defined by the ability to sustain high intensity combat under contested conditions at progressively greater distances from China’s shores, as represented in Table 3.

Posture	Sea Denial	Sea Control	Scope and Nature
Regional Anti-Access	X		China’s maritime periphery (within First Island Chain)
Extended Blue Water Anti-Access	X		Maritime periphery and approaches thereto (out to Second Island Chain, full extent of South China Sea)
Limited Expeditionary		X	Noncombatant Evacuation Operations (NEO) and Marine Interception Operations (MIO), when necessary, in Western Pacific and Indian Ocean
Blue Water Expeditionary		X	Core strategic areas (e.g., Persian Gulf)
Global Expeditionary		X	Major strategic regions of world

Table 3. Potential Future PLAN Force Postures.

The first two benchmarks fall under the rubric of “sea denial,” or the ability to prevent opponent(s) from using a given sea area without controlling it oneself. The second three benchmarks may be consid-

ered variants of “sea control,” or command of the sea sufficient to allow one’s own vessels to operate freely in a given sea area by preventing opponent(s) from attacking them directly. Most naval theorists would differentiate these two approaches, the latter of which is far more demanding than the former and requires a much broader range of capabilities, even for operations within the same geographic area—it is not simply a question of “being able to do more from further away.” As such, the first benchmark is arguably within China’s grasp today; there is no guarantee that the last will ever be pursued.

China’s naval development thus far has been focused largely on developing a variant of regional anti-access to prevent Taiwan from declaring independence, in part by developing credible capabilities to thwart U.S. forces should Washington elect to intervene in a cross-Strait crisis. Taiwan’s status remains the most sensitive, and limiting, issue in U.S.-China relations. But Taiwan President Ma Ying-jeou’s March 2008 landslide election, and his pragmatic policies, have greatly reduced the risk of conflict. Now, with cross-Strait relations stable and China continuing to grow as a global stakeholder, China’s navy is likely to supplement its Taiwan and South China Sea-centric access denial strategy that its current naval platforms and weaponry largely support with “new but limited requirements for protection of the sea lanes beyond China’s own waters, humanitarian assistance/disaster relief, and expanded naval diplomacy.”¹⁵⁵ Table 4 outlines the PLAN’s current order of battle.

Platform	North Sea Fleet	East Sea Fleet	South Sea Fleet	Total
Nuclear Attack Submarines	4	0	2	6
Nuclear Ballistic Missile Submarines	2	0	1	3
Diesel Attack Submarines	20	19	14	53
Destroyers	10	8	8	26
Frigates	8	22	18	48
Amphibious Ships	9	19	30	58*
Missile Patrol Craft	15	32	33	80+
Mine Warfare Ships	N/A	N/A	N/A	40
Major Auxiliaries	N/A	N/A	N/A	50 (5 are fleet AORs)
Minor Auxiliaries and Service/Support Craft	N/A	N/A	N/A	250+

Table 4. China's Naval Order of Battle (2009).¹⁵⁶

According to Scott Bray, Senior Intelligence Officer-China, Office of Naval Intelligence, "Between 2000 and 2009, the number of major surface combatants capable of carrying long-range ASCMs (anti-ship cruise missiles) has tripled from 12 to 36. Additionally, the PLA(N) has built more than 50 small combatants with long-range ASCMs." Still, this is part of an emphasis on improving quality and anti-access capability; the PLAN as a whole remains far from supporting a substantial SLOC security posture.

There appears to be leadership support for at least a gradual increase in long-range Chinese naval capabilities of lower intensity. Hu requires the PLA "to not only pay close attention to the interests of national survival, but also national development interests; not only safeguard the security of . . . territorial waters . . .

but also safeguard . . . the ocean. . . .”¹⁵⁷ On December 27, 2006, in a speech to PLAN officers attending a Communist Party meeting, Hu referred to China as “a great maritime power (海洋大国)” and declared that China’s “navy force should be strengthened and modernized” and should continue moving toward “blue water” capabilities.¹⁵⁸ China’s 2008 *Defense White Paper* stated that “the Navy has been striving . . . to gradually develop its capabilities of conducting cooperation in distant waters.”¹⁵⁹ Chinese defense policy intellectuals who are not directly connected with the PLAN also generally consider SLOC security to be a major issue.¹⁶⁰

China may already be pursuing the ability to project naval power further than would be necessary in a Taiwan contingency. China’s 2008 *Defense White Paper* for the first time treats the ground forces as a distinct service equivalent to the Navy, Air Force, and Second Artillery,¹⁶¹ and there are increasing indications that the PLA may abandon the present configuration of military regions in favor of a more streamlined and outward-looking organizational posture.¹⁶² These emerging developments, and the gradually increasing though still disproportionately low representation of PLAN officers on the CMC, CCP Central Committee, and at the helm of PLA institutions suggests that the ground forces are becoming less dominant within the military and that the PLAN may grow correspondingly over time in funding and mission scope.

As the most technology intensive,¹⁶³ comprehensive, strategic-level (day-to-day), multirole, multidimensional, diplomatically-relevant, and naturally internationally-oriented of the services, the PLAN might stand to benefit most from such an increasingly “externalized” orientation.¹⁶⁴

To be sure, proponents of SLOC defense as a mission for the PLAN are not the only ones contributing to what seems to have become a robust debate within China. Some Chinese views acknowledge the costs and difficulty of building the power-projection capabilities necessary to carry out credible SLOC defense missions (e.g., aircraft carriers), as well as the potential for balancing against China by regional neighbors and the political costs that would likely occur in the event that China procured a carrier battle group. Many writers express similar or related reservations, either directly or indirectly. Moreover, there are competing priorities: enhanced expeditionary capabilities (e.g., LPDs, LHAs, helicopters) to protect overseas Chinese workers may be more important over the next decade. It could well be argued that China is more likely to need to conduct a NEO somewhere in the Indian Ocean littoral than protect its SLOCs against a major naval threat.¹⁶⁵ The presence of these views within China may help explain why the arguments for energy/SLOC-defense missions have not yet gained greater traction.

Chinese writings suggest a range of views on how to organize the PLAN for operations further afield. A sustained movement of assets to the South China Sea could imply a PLAN mission beyond Taiwan, in pursuit of genuine, if limited, SLOC protection capability. Increased PLAN presence in key SLOC areas could also have a valuable “shaping” function, as it can “strengthen [China’s] power of influence in key sea areas and straits” in peacetime and thereby decrease the chance of its interests being threatened in war.¹⁶⁶

Here hardware acquisition and deployment is a useful indicator, because it is relatively easy to monitor. To be sure, modern warships are capable of per-

forming many missions, and hence are not restricted to a specific role in specific waters. Their political masters presumably find them useful to perform a variety of missions in a wide range of circumstances and locations (e.g., both a Taiwan context and deployments farther afield). But to fully pursue robust long-range capabilities, new platforms and force structures would be needed. With respect to force structure, indicators of a more ambitious Chinese naval presence, particularly in the area of SLOC protection, would likely include the following, as Table 5 indicates.

Capability	Approach
Anti-Submarine Warfare	Construction of nuclear attack submarines and deployment of additional units of these and other platforms with significant demonstrated ASW capabilities. ¹⁶⁷
Long-range Air Power	Development of carriers, aircraft and/or helicopters to operate off them, and related doctrine and training programs. ¹⁶⁸
Military Ship Production	Establishment of new, modern shipyards dedicated to military ship production or expansion of areas in coproduction yards that are dedicated to military ship production. ¹⁶⁹
At-Sea Replenishment	Expansion of the PLAN auxiliary fleet, particularly long-range, high-speed oilers and replenishment ships. ¹⁷⁰
Remote Ship Repair	Development of the ability to conduct sophisticated ship repairs remotely, either through tenders or overseas repair facilities. ¹⁷¹
Operational Readiness	Steady deployment of PLAN forces to vulnerable portions of the sea lanes to increase operational familiarity and readiness.
Overall Capacity	Maturation of advanced levels of PLA doctrine, training, and human capital.

Table 5: Indicators of Emerging PLAN Blue Water SLOC Protection Capabilities.

The PLAN's capabilities in key areas (assets, trained personnel, and experience) are currently insufficient to support long-range SLOC defense mis-

sions, but it may gradually acquire the necessary funding and mission scope. China's growing maritime interests and energy dependency may gradually drive more long-ranging naval development; indeed, repeated reports of imminent aircraft carrier development seem to represent an initial step in this direction. China is likely to develop some form of deck aviation capability, both for national prestige and for limited missions beyond Taiwan.¹⁷² ONI estimates that China's former Ukrainian *Kuznetsov* class aircraft carrier *Varyag* will become operational as a training platform by 2012, and "the PRC will likely have an operational, domestically produced carrier sometime after 2015."¹⁷³ Developing the necessary forces, training, and experience for true blue water combat capabilities would be extremely expensive and time-consuming, however. Building an aircraft carrier is one thing; mastering the complex system of systems that enable air power projection costs years and precious lives.¹⁷⁴

Overseas Facilities Access?

Perhaps the strongest indicator of Chinese intentions to develop blue water power projection capabilities would be pursuit of reliable access to overseas air and naval bases. At present, China appears far from having overseas naval bases of its own.¹⁷⁵ But recent debate among PLA scholars and other analysts suggests that China may be actively reconsidering its traditional approach of avoiding "power politics and hegemonism" by avoiding any kind of overseas military facilities.¹⁷⁶

PLAAF Colonel Dai Xu, for instance, has openly advocated Chinese development of "overseas bases (遠洋基地)" to "safeguard commercial interests and

world peace.”¹⁷⁷ Specifically, Dai argues that support facilities are required not only to protect China’s growing global economic interests, but also to enable PLA participation in peacekeeping missions, ship escort deployments, and humanitarian assistance and disaster relief operations.¹⁷⁸ Moreover, Dai argues that overseas bases or support facilities are required if China is to “effectively shoulder its international responsibilities and develop a good image.” Perhaps anticipating the possibility that setting up overseas bases would heighten international concerns about China’s growing power, however, Dai states that Chinese bases would not be part of a global military competition and “would not require long-term stationing of large military equipment or large-scale military units.” Furthermore, Dai suggests that a strategic communications campaign would help to alleviate concerns about China’s intentions.¹⁷⁹ As a first step, Dai advocates the establishment of a prototypical “test” base in the strategically vital South China Sea,¹⁸⁰ presumably in addition to existing facilities at Woody Island and Mischief Reef. Future bases should then be established in other areas where China has important strategic interests; when possible, bases should be located in countries with which China already has what Dai—perhaps somewhat optimistically—characterizes as “friendly, solid relationships.”

While there are indications of growing Chinese influence in the South Pacific for commercial and perhaps even signals intercept purposes,¹⁸¹ it is the Indian Ocean with its rich littoral resources¹⁸² and busy energy SLOCs that seems the most likely future area of Chinese naval power projection. A range of Chinese analyses state that from ancient times through the Cold War, the Indian Ocean has been a critical theater

for great power influence and rivalry.¹⁸³ Some PLA analysts argue, for instance, that it should be perfectly acceptable for China to advance to the Indian Ocean with changes in its national interests.¹⁸⁴ A second assessment in China's official news media suggests that to protect its newly emerging interests, China should learn from the United States, develop several overseas bases (e.g., in Pakistan, Burma, and Sudan), and build three or four aircraft carriers.¹⁸⁵ Huang Li states that as other nations become accustomed to the PLAN making "frequent appearances" in the Indian Ocean, "to look for a base on land will naturally follow" (物色陆上基地也就顺理成章了).¹⁸⁶

It must be emphasized, however, that any change is likely to be gradual, and that many countervailing factors are likely to be at work. Countless debates over security policy issues have failed to produce change. Some powerful individuals are likely to resist changing the status quo, citing concerns about cost, impact on competing priorities, image, and departure from historical precedent/ideology in the form of self-imposed prohibition on foreign basing, outside of UN missions. Moreover, the PLAN's use of civilian and commercial (both Chinese and host country) entities to support its ships in the Gulf of Aden, both during port visits as well as at sea, demonstrates that China does not need a *military* presence/basing to support military operations.

It thus seems likely that China will not establish a "string of pearls," with extremely expensive and hugely vulnerable "bases."¹⁸⁷ While the Chinese government's anti-overseas basing statements appear to be less strident and frequent than in the past, this would not necessarily alter Beijing's position on foreign "basing." This is most in keeping with Chinese

tradition and ideology and will be seen by Beijing's leadership as less threatening; China will be aware of the implications for its international image. Change is likely to be incremental.¹⁸⁸

Instead, the most likely approach may be to pursue access to "overseas support facilities" capable of supporting expanded PLA participation in nontraditional security missions such as anti-piracy and humanitarian assistance and disaster relief operations in a very modest version of the U.S. "places, not bases" strategy. These support centers could presumably handle the requirements of nonwar military operations—such as food, fuel, and maintenance and repair facilities—without the prepositioned munitions and large-scale military presence typically associated with full-fledged overseas bases. In theory, any port in any country could do this, so long as the host country agrees. In practice, however, Beijing is likely to want access in countries that it considers politically reliable and immune to pressure from such potential competitors as the United States and India. China has been making small steps in this direction since around 2000, including participation in UN peacekeeping operations (PKOs).

In the absence of the ability to win a naval battle in the Indian Ocean, China is seeking to influence in areas proximate to Indian Ocean sea lanes through diplomacy, trade, humanitarian assistance, arms sales, and even strategic partnerships with countries in the region—including several nations traditionally hostile to India (e.g., Pakistan and Bangladesh). This "soft power" approach is designed to maximize access to resource inputs and trade in peacetime, while attempting to make it politically difficult for hostile naval powers to sever seaborne energy supplies in times of

crisis, as they would be harming regional interests in the process.¹⁸⁹ Greater access to regional port facilities may be one outcome of China's soft power initiatives.

For several years now, China has been developing a number of what Kamphausen and Liang refer to as "access points," or "friendly locations" that are intended to enhance the PLA's ability to project power in Asia.¹⁹⁰ Pakistan's port of Gwadar and Sri Lanka's port of Hambantota represent possible candidates. China has invested significantly in their development, and has made contributions over the years to the welfare of their host governments in the areas of politics, economics, and infrastructure.¹⁹¹ Perhaps the PLAN is making greatest progress in Burma, where it has reportedly assisted in the construction of several naval facilities (their precise nature undefined) on the Bay of Bengal.¹⁹² A major entrepôt sitting astride key transit lanes, with a large ethnic Chinese population and good relations with the PRC, and with its primary security concerns Malaysia and Indonesia, not a rising China, Singapore might ultimately allow the PLAN some form of access.¹⁹³ Table 6 details tentatively some of the potential ports to which the PLAN might attempt to gain some form of special, if limited, access in the future.

Port	Country	Relations with China	Chinese Investment in Facility	Type	Development Status	Draft Limits (m)	Quality of Repair Facilities
Salalah	Oman	Long-term stable and significant; China imports 250-300,000 BPD of oil from Oman and is purchasing LNG	None yet; 10 PLAN counter-piracy task force visits through January 2010; Chinese unofficial media reports bilateral negotiations to establish facility	Deep water, major container transshipment port for Persian Gulf	Already well-established; construction of new port-side fuel bunkering facility under way; massive container terminal expansion plan contracted out	15.5	Only small craft facilities currently available
Aden	Yemen	Short-term but developing steadily; recent energy, trade, and commercial agreements	None yet; visited by many PLAN counter-piracy task forces; reportedly under consideration for Chinese supply access; some security concerns	Container and bulk cargo	Moored port; berth extension planned	16 outer channel; 6-20 outer harbor anchorage	National Dockyard Company offers range of limited facilities and services
Djibouti	Djibouti	Long-term stable and positive	None; home to French and American defense facilities; Japan permitted to base P-3C aircraft for counter-piracy patrols; visited by PLAN counter-piracy task force	Principal port for Ethiopian cargo transshipment, containers and bulk cargo	Container terminal under construction	12	Small repairs possible
Gwadar	Pakistan	Long-term strategic	\$198MM; technicians and skilled workers	Large commercial port with conventional and container cargos (operated by Port of Singapore on 40 year contract) + Pakistan navy	Already well-established, but potential for further development	12.5	500 acre shipyard; 2 600xwft drydocks planned; VLCC + ULCC construction planned
Karachi	Pakistan	Long-term strategic	N/A	Pakistan's largest port	Already well-established; Bulk Cargo Terminal and other expansion underway	9.75 upper harbor; 12.2 approach channel; being increased to 13.5; developing 16 m container terminal	PLAN's current Indian Ocean port of choice for repairs. Two drydocks available, one for up to 25,000DWT
Hambantota	Sri Lanka	Short-term strategic	\$360MM export buyer's credit from China's EXIM Bank "built by Chinese enterprises"	Commercial; export of essential goods, vehicle re-exports	To be constructed in 3 stages over 15 years	16-17 (future)	Ship servicing capabilities planned
Chittagong	Bangladesh	Long-term friendly	N/A	Bangladesh's main seaport; 6 general cargo berths; 11 container berths (3 dedicated with gantry crane)	Completed	7.5-9.15	Private repair yards available. Drydock available for vessels up to LOA 170m and 16,500DWT
Sittwe	Burma	Long-term strategic	Assisting (India helping too)	Large rice exporting port	Under development over 3 years	7.6	N/A
Singapore	Singapore	Long-term friendly, emerging strategic	N/A	Large, sophisticated, commercial sub-ports; busiest in world; 1 terminal, 9 sub-ports. Military ports.	Already well-established, but potential for further development	22	Excellent

Table 6: Selected Potential "Places" for Access.¹⁹⁴

i. "Chinese-Assisted Pakistani Gwadar Deep-Water Port Starts Operation," Xinhua, May 20, 2007, OSC CCP20070320968174; Editorial: Gwadar's Strategic Aspects are Still Relevant," Daily Times, Lahore, Pakistan, December 23, 2008, OSC SWP20081223101005.

ii. "China-Pakistan Friendship Lasts Forever," People's Daily, October 20, 2008, OSC CPP20081021701002; iii. Khaleeq Kiani, "\$60bn Income Likely from Mega Projects," Dawn, Karachi, Pakistan, October 27, 2007, OSC SWP20071027099003.

iv. "Sri Lanka Inaugurates Port Project in South," Xinhua, October 31, 2007, OSC CPP20071031068251; v. "Chinese Delegation Vis for Dedicated Zone in Sri Lanka," Daily Mirror Online, Colombo, Sri Lanka, May 20, 2009, OSC SWP20090520549002.

vi. Zhang Xin, "Rumors on Ties with Sri Lanka Dismissed," China Daily, July 4, 2009, OSC CPP20090704968025; vii. Kamphausen and Liang, p. 130.

In the future, any facilities that China did establish or plan to use would have to be defended effectively in the event of conflict. Gwadar, for instance, has been designed in part to “serve as an alternate port to handle Pakistani trade in case of blockade of existing ports,” however, and Pakistan might be reluctant to grant the PLAN access during a conflict.¹⁹⁵ Gwadar, like any other potential port for PLAN use on the Pakistani coast, the Saudi peninsula, or the East Africa coast is located west of India and is thus too easily interdicted for any significant use by PLAN forces—unless India agrees to such use.¹⁹⁶ While it is easy to look at a map of the Indian Ocean and make shallow historical analogies to Mahan and the age of navalism a century ago, in this era of long range precision strike, a series of exposed and nonmutually supporting bases is unlikely to pay off in the event of war.

IMPLICATIONS

China’s leaders approved the Gulf of Aden deployment to protect Chinese ships, which were being attacked and sometimes captured by pirates, under the aegis of furthering international security. This does not necessarily signify a change in Beijing’s sensitive approach to national sovereignty issues: four UN resolutions and the Somali Transitional Federal Government itself explicitly support these missions. Instead, it represents China’s debut as an international maritime stakeholder, and a vital training opportunity for its navy. Significant logistics capabilities constitute the vital backbone of the mission; their largely commercial nature suggests dynamism and sustainability that could make future efforts in this area both feasible and affordable. In sum, the PLAN is clearly attaining

a new level of blue-water experience; it remains to be seen how that knowledge will be spread throughout the service, and to what ends Beijing will put the new capabilities that result.

The PLAN's evolving role in defending China's expanding economic interests, as demonstrated in its ongoing Gulf of Aden deployments, has broader implications. For now, China seems to be pursuing a two-level approach to naval development, with consistent focus on increasingly formidable high-end anti-access capabilities to support major combat operations on China's maritime periphery (e.g., a Taiwan scenario), and relatively low-intensity but gradually growing capabilities to influence strategic conditions further afield (e.g., Indian Ocean) in China's favor.

Some expect Beijing to pursue a more ambitious approach. One American scholar believes that "the main disadvantage from Washington's perspective could be that, should Chinese leaders consider the Somali mission a success, they would likely prove more willing to promote the continued growth of China's maritime power projection capability."¹⁹⁷ Robert Ross envisions Chinese "construction of a power-projection navy centered on an aircraft carrier."¹⁹⁸ One predeployment Chinese analysis advocates just such a redirection of PLAN strategy: priorities from a submarine-centric navy to one with aircraft carriers as the "centerpiece."¹⁹⁹ Such a shift would have major domestic and international implications. Internally, it would mean that the PLAN would likely capture a much larger portion of the defense budget, especially as the carriers themselves would need a complement of aircraft and a dedicated fleet of escort vessels to be useful in actual combat conditions. Its internal clout would be further enhanced by the fact that aircraft

carriers might rapidly become an important diplomatic instrument for projecting Chinese presence and influence in Asia, and perhaps (eventually) globally.

By this logic, moving toward a carrier-centric navy could prompt other navies in the region and further afield to upgrade their own forces in anticipation of China's taking a more assertive stance regarding naval power projection. Despite efforts both to channel China's maritime development in a peaceful direction and to portray it accordingly to the rest of the world, history suggests that any major military modernization program is likely to antagonize other powers. Internationally, moving toward a carrier-centric navy could prompt other regional and global navies to upgrade their own forces in anticipation of China's taking a more assertive stance regarding naval power projection.

I foresee a very different trajectory for China's navy. While China will no doubt build as many as several carriers over the next decade, its two-level approach to naval development is likely to persist for some time, with parallel implications for American security interests. China's military has achieved rapid, potent development by maintaining an anti-access posture along interior lines and exploiting physics-based limitations inherent in the performance parameters of U.S. and allied platforms and C4ISR systems.²⁰⁰ This should be of tremendous concern to Washington. But dramatic breakthroughs here should in no way be conflated with developments further afield: the core elements of this approach cannot easily be transferred to distant waters. In perhaps the most graphic example of this strategic bifurcation, the Chinese military, as it develops increasing capabilities to target aircraft carriers, is likely becoming acutely aware of their vul-

nerabilities – and hence reluctant to devote more than a modest level of resources to their development.

Just as these limiting factors increasingly threaten U.S. platforms operating in or near China's maritime periphery, they likewise haunt China's navy as it ventures further afield – a navy that is still far, far behind that of the United States in overall resources and experience. Thus far, Chinese decisionmakers, having carefully studied the lessons of Soviet overstretch, seem unlikely to expend overwhelming national resources to fight these realities. Despite their growing concerns abroad, they have too many imperatives closer to home that demand ongoing funding and focus. Additionally, in two separate articles, one in written in 2007 and one in 2009, Admiral Wu Shengli, the commander of the PLAN, clearly states that the PLAN will continue to develop into a force that is smaller in quantity, yet greater in quality. In the 2009 article, he also states that naval modernization must be put within the overall context of national modernization as well as the overall context of military modernization. This suggests an honest acknowledgement of the reality that resources allocated to the PLAN are and will continue to be finite.²⁰¹ Given ongoing requirements for the PLAN to provide security for Chinese interests in the South and East China Seas, it is highly unlikely that a PLAN that is smaller in quantity will be able to sustain the sort of robust footprint in the Indian Ocean that some Western analysts claim it is moving toward, no matter how much greater in quality it may be.

It thus seems likely that for the foreseeable future China will have limited capabilities but significant shared interests with the United States and other nations in the vast majority of the global maritime com-

mons. In fact, the prospects for China to participate further in the global maritime regime as a maritime strategic stakeholder look better than ever, now that Beijing increasingly has the capabilities to do so substantively.²⁰² The United States, in accordance with its new maritime strategy, has welcomed China's deployment to the Gulf of Aden as an example of cooperation that furthers international security under the concept of Global Maritime Partnerships. Admiral Timothy Keating, Commander, U.S. Pacific Command, has vowed to "work closely" with the Chinese task group, and use the event as a potential "springboard for the resumption of dialog between People's Liberation Army (PLA) forces and the U.S. Pacific Command forces."²⁰³ In this sense, the Gulf of Aden, with no Chinese territorial claims or EEZ to inflame tensions, may offer a "safe strategic space" for U.S.-China confidence building measures and the development of "habits" of maritime cooperation.²⁰⁴

Washington's real security challenges in the Asia-Pacific, for now, are fostering stability and development while preventing transnational terrorism in southwest Asia; preserving peace in the Taiwan Strait; reassuring U.S. allies; and cooperating with China and other nations to restrain North Korea's reckless brinksmanship. Beyond that, the United States and China have considerable shared interests in maritime security and prosperity. In the words of Sun Zi, they are "crossing the river in the same boat, and should help each other along the way" (同舟共济). There is a lot the two great powers can accomplish together, if both sides do their part.²⁰⁵

ENDNOTES - CHAPTER 7

1. Existing literature on this subject falls into several categories. For PLAN development, see 张世平 (Zhang Shiping), “中国海权” (“China Sea Power”), Beijing, China: 人民日报出版社 (*People's Daily Press*), 2009; Nan Li, “The Evolution of China's Naval Strategy and Capabilities: From ‘Near Coast’ and ‘Near Seas’ to ‘Far Seas’,” *Asian Security*, Vol. 5, No. 2, May 2009, pp. 144-169. For piracy, see Martin Murphy, *Small Boats, Weak States, Dirty Money*, New York: Columbia University Press, 2009. For naval operations in the Gulf of Aden, see Gary J. Ohls, *Somalia . . . From the Sea*, Naval War College *Newport Paper*, No. 34, 2009.

2. See Bernard D. Cole, Ph.D., Testimony before the U.S.-China Economic and Security Review Commission, “China's Military and Security Activities Abroad,” March 4, 2009, p. 4.

3. Guo Gang, “Escort by Military Vessels: Chinese Naval Escort Formation Gathered Representatives of Escorted Merchant Ships Together to Exchange Views on and Discuss Escort Safety,” *Xinhua*, October 26, 2009, OSC CPP20091026354006.

4. At an expanded CMC conference on December 24, 2004, Chairman Hu introduced a new military policy that defined the four new missions of the PLA: first, to serve as an “important source of strength” for the Chinese Communist Party (CCP) to “consolidate its ruling position”; second, to “provide a solid security guarantee for sustaining the important period of strategic opportunity for national development”; third, to “provide a strong strategic support for safeguarding national interests”; and fourth, to “play an important role in maintaining world peace and promoting common development.” See “Earnestly Step up Ability Building within CPC Organizations of Armed Forces,” *解放军报* (*Liberation Army Daily*), December 13, 2004, available from www.chinamil.com.cn; “三个提供, 一个发挥” (“Three Provides and One Bring Into Play”), available from news.sina.com.cn. The second mission entails continued military modernization to enhance the credibility of deterrence against threats on China's periphery (e.g., the possibility of Taiwan independence). The resulting strategic stability ensures a peaceful external environment for economic development, globalization and integration of China into the global economy at a time when China can

benefit from diversion of U.S. attention to countering terrorism. According to a subsequent article in the PLA's official newspaper, the third includes maritime rights and interests. 刘明福, 程钢, 孙学富 (Liu Mingfu, Cheng Gang, and Sun Xuefu), "人民军队历史使命的又一次与时俱进" ("The Historical Mission of the People's Army Once Again Advances with the Times"), 解放军报 (*Liberation Army Daily*), December 8, 2005, p. 6. See also 杨毅, 主编 (Yang Yi, chief editor), 国家安全战略研究 (*Research on National Security Strategy*), Beijing, China: 国防大学出版社 (National Defense University Press, 2007, p. 323. For further background, see Cole, p. 1; James Mulvenon, "Chairman Hu and the PLA's 'New Historic Missions'," *China Leadership Monitor*, No. 27, Winter 2009, available from www.hoover.org/publications/clm/issues/37362924.html.

5. Daniel M. Hartnett, "The PLA's Domestic and Foreign Activities and Orientation," Testimony before the U.S.-China Economic and Security Review Commission, "China's Military and Security Activities Abroad," Washington, DC, March 4, 2009.

6. 沈金龙 (Shen Jinlong, Commander of a North Sea Fleet Support Base), "海军非战争军事行动一面临的挑战及对策" ("Naval Non-Combat Military Operations—Challenges Faced and Countermeasures"), 人民海军 (*People's Navy*), December 1, 2008, p. 4.

7. "Our economic development generates the need of overseas resources and markets, and there are hidden dangers in the security of our development," explains a Nanjing Army Command College political commissar, Major General Tian Bingren. "With the deepening of economic globalization and increasingly frequent flow of . . . energy sources, an outside local war or conflict will influence the development and construction of a country." 田秉仁 (Maj. Gen. Tian Bingren), "新世纪阶段我军历史使命的科学拓展" ("The Scientific Development of the Historical Mission of Our Army in the New Phase of the New Century"), 中国军事科学 (*China Military Science*), October 2007, pp. 21-27, OSC CPP20080123325001. Writing in a PLA newspaper, the recently retired Major General Peng Guangqian—who has served as a research fellow at China's Academy of Military Sciences and who, as an adviser to China's powerful Central Military Commission (CMC) and Politburo Standing Committee, has enjoyed signifi-

cant influence in the shaping of PLA strategy – warns that “some of the foreign hostile forces” may “control the transport hubs and important sea routes for China to keep contact with the outside, and curb the lifeline China needs to develop.” 彭光谦 (Peng Guangqian), “从着重维护生存利益到着重维护发展利益—对国家安全战略指导重心转变的一点思” (“From the Focus on Safeguarding the Interests of Survival to the Focus on Safeguarding the Interests of Development”), 中国国防报 (*National Defense News*), January 17, 2007, OSC CPP20070119710012. These statements may allude to concerns about potential great power competitors, but they could also apply even to non-state actors like pirates.

8. 田中 (Rear Admiral Tian Zhong), “海军非战争军事行动的特点, 类型及能力建设” (“Characteristics, Types, and Capability Development of Naval Non-War Military Operations”), 中国军事科学 (*China Military Science*), No. 3, 2007; 沈金龙 (Shen Jinlong) “海军非战争军事行动面临的挑战及对策” (“Naval Non-War Military Operations: Challenges Faced and Coping Strategies”), 人民海军 (*People’s Navy*), January 20, 2009, p. 4. Tian is the commander of the North Sea Fleet, Shen is commander of a North Sea Fleet support base.

9. China has 260 shipping companies. Its flagged merchant fleet ranks fourth in the world, with 400,000 mariners crewing 3,300 ocean-going ships of 84.88 million deadweight tons. 张庆宝 (Zhang Qingbao), “‘海外经济利益应由自己来保护’ —本报记者专访国家交通运输部合作司司长局成志” (“‘We Should Protect Our Overseas Economic Interests’: An interview with Director-General Ju Chengzhi of the International Cooperation Department under the Ministry of Transportation”), 人民海军 (*People’s Navy*), January 9, 2009, p. 4.

10. “10% of GDP Now Comes from Sea, Says Report,” *China Daily*, April 10, 2007, available from www.chinadaily.com.cn.

11. Between January-October 2009, Chinese shipyards won 2.7 million compensated gross tons of total global ship orders, or 52.3 percent of the world total.

12. Skyrocketing car ownership will hamper efforts to make China’s economy less petroleum-intensive.

13. Andrew S. Erickson, "Pipe Dream—China Seeks Land and Sea Energy Security," *Jane's Intelligence Review, China Watch*, Vol. 21, No. 8, August 2009, pp. 54-55.

14. Wu Jiao, "Navies Seeking Better Ways to Battle Pirates," *China Daily*, November 6, 2009, p. 1. It is unclear whether this means Chinese owned, Chinese flagged (or both), or simply carrying goods to China.

15. Alison A. Kaufman, *China's Participation in Anti-Piracy Operations off the Horn of Africa: Drivers and Implications*, conference report, Alexandria, VA: CNA Corporation, 2009, p. 8. Interestingly, it is just this sort of (probably illegal) fishing that the Somalis cite as the reason they have turned to piracy, yet "China has thus far refused to ratify the U.N. Fish Stocks Agreement." Lyle Goldstein, "Strategic Implications of Chinese Fisheries Development," *Jamestown China Brief*, Vol. 9, No. 16, August 5, 2009, available from www.jamestown.org/single/?no_cache=1&tx_ttnews%5Btt_news%5D=35372.

16. "China to Bolster Image as Responsible Big Nation," *People's Daily*, December 24, 2008, available from english.people.com.cn/90001/90780/91342/6561221.html.

17. Pirates released the crew unharmed on February 8 after negotiations with Chinese diplomats. "Somali Pirates Release Chinese Boat After 3 Months in Captivity," *Agence France Press*, February 8, 2009.

18. "Pictured: Desperate Chinese Sailors Fight off Somali Pirates with Beer Bottles and Molotov Cocktails," *The Daily Mail*, December 23, 2008, available from www.dailymail.co.uk/news/worldnews/article-1098125/Pictured-Desperate-Chinese-sailors-fight-Somali-pirates-beer-bottles-Molotov-cocktails.html.

19. "Chinese Ship Rescued in Gulf of Aden, Pirates Retreat," *Xinhua*, December 17, 2008, available from www.chinadaily.com.cn/china/2008-12/17/content_7315328.htm.

20. Wu Jiao and Peng Kuang, "Sailing to Strengthen Global Security," *China Daily*, December 26, 2008, available from www.chinadaily.com.cn/china/2008-12/26/content_7342612.htm.

21. For the importance of oil tanker security to China, see Andrew Erickson and Gabriel Collins, "Beijing's Energy Security Strategy: The Significance of a Chinese State-Owned Tanker Fleet," *Orbis*, Vol. 51, No. 4, Fall 2007, pp. 665-84.

22. Beijing has acknowledged publicly that its increasingly global interests will require a presence abroad—at least in the commercial and humanitarian dimensions. Since China opened up to the world in 1978, this has taken the form first of diplomacy, development efforts, and trade, then UN Peacekeeping missions, and now counterpiracy efforts.

23. Wu Jiao and Peng Kuang, "Sailing to Strengthen Global Security," *China Daily*, December 26, 2008, available from www.chinadaily.com.cn/china/2008-12/26/content_7342612.htm.

24. Richard Weitz, "Operation Somalia: China's First Expeditionary Force?" *China Security*, Vol. 5, No. 1, Winter 2009, p. 37.

25. Unless otherwise specified, all MNDIO data cited are derived from Matthew Boswell, "Media Relations in China's Military: The Case of the Ministry of National Defense Information Office," *Asia Policy*, No. 8, July 2009, pp. 97-120.

26. Two other PLA representatives presented conditions and answered reporters' questions on the PLAN's escort mission to the Gulf of Aden, including Rear Admiral Xiao Xinnian, Deputy Chief of Staff, PLAN; and Senior Colonel Ma Luping, Director of the Navy Operations Department in the General Staff Headquarters Operations Department, PLAN. China Ministry of *National Defense News Conference*, December 23, 2008, available from military.people.com.cn/GB/1076/52984/8565326.html; www.gov.cn/xwfb/2008-12/23/content_1185458.htm.

27. 李韬伟 (Li Taowei), "今日长缨在手—海军司令部作战部长沈浩答本报记者问" ("Today We Hold the Long Cord in Our Hands—Shen Hao, Director of the the director of the Operations Department at PLAN Headquarters, Answers Our Reporter's Questions"), *人民海军 (People's Navy)*, December 27, 2008, p. 3.

28. In response to charges that China should do more to further collective security close to home, PLA spokesmen state that

China is not similarly involved in Southeast Asia because the situation in Malacca is different from that in the Gulf of Aden. Piracy in the Malacca Strait is already controlled through the joint efforts of the coastal states Indonesia, Thailand, Singapore, and Malaysia. In Somalia, by contrast, the problem is more rampant—with 10 times as many attacks in the past year—and sea conditions around the Gulf of Aden are more complex. “出兵索马里海域护航 国防部介绍情况” (“Dispatching Forces to Escort in the Somalia Sea Area—The Ministry of National Defense Presents the Situation”), 中评社 (Zhongping News Agency), December 23, 2008. See also Huang Li, pp. 175-76. For further MNDIO updates on the missions, see “Chinese Naval Frigate Comes to Escort Released Filipino Tanker in Somali Waters,” *Xinhua*, April 26, 2009; Central People’s Government of the People’s Republic of China, January 20, 2009, available from www.gov.cn/wszb/zhibo300/; Jiao Wu and Kuang Peng, “No Threat from Military Development,” *China Daily*, January 16, 2009, available from www.chinadaily.com.cn/china/2009-01/16/content_7403124.htm; “胡昌明: 护航行动是在联合国框架下履行国际义务” (“Hu Changming: Ship Escort Activities Are Carried Out under United Nations Framework”), *Renmin Wang*, December 25, 2008.

29. 黄立 (Huang Li), 剑指亚丁湾: 中国海军远洋亮剑 (Sword Pointed at the Gulf of Aden: The Chinese Navy’s Bright Far Seas Sword), Guangzhou, China: 中山大学出版社 (Zhongshan University Press), 2009, p. 174. Dr. Huang Li is a professor at South China Normal University Law School, where he teaches international criminal law to master’s students. He is also a member of the China branch of the International Criminal Law Association, and Vice President of the Guangdong Province Criminal Law Institute. Huang worked in China’s public security system for twelve years, achieving the rank of third class police inspector. He has conducted extensive research, and his reports have been praised by the Ministry of Public Security leadership. Huang is an influential expert in China on organized crime. His publications include the 2008 monograph, “Crack Down on Speculation and Profiteering, Eliminate the Loathsome Cancer Uprooting the Harmonious Society.” While Huang acknowledges that he lacks naval operational expertise, his book is a useful compilation of open source information and displays incisive critical analysis.

30. *Ibid.*, p. 168.

31. Chinese shippers have seized a significant portion of the global shipping market by coming from the market that most drives growth in global bulk commodity and container shipping, and by minimizing crewing and other costs. No shippers from any country have been eager to spend money on private security fees, as this would affect their margins significantly and make them less competitive.

32. Huang Li, pp. 170. During the concurrent Russia-Georgia War, Moscow reportedly invited Beijing to send ships to fight pirates, but Beijing feared becoming implicated in an anti-NATO "alliance."

33. *Ibid.*, pp. 169. Eighty-six percent of respondents to a Chinese news media survey agreed that "China should send warships to fight international pirates and protect cargo ships of China." But some Chinese feared the potential for a new "China Threat Theory," the potential for PLAN secrets to be revealed, and the potential for disproportionate cost; and advocated a free-riding approach.

34. *Ibid.*, p. 170.

35. The author is indebted to Nan Li for these insights.

36. Huang Li, p. 170.

37. *Ibid.*

38. See "Head of International Cooperation Department of Ministry of Transportation Reveals Origins of Decision on Naval Escort," 三联生活周刊 (*Sanlian Life Weekly*), January 16, 2009, available from www.lifeweek.com.cn; "Military Law Precedes Movement of Troops and Horses—The Chinese Military Also Needs the 'Cover' of Law," 南方周末 (*Southern Weekend*), April 2, 2009. The author thanks Nan Li for directing him to these sources.

39. 李韬伟 (Li Taowei), "今日长纓在手—海军司令部作战部长沈浩答本报记者问" ("Today We Hold the Long Cord in Our Hands—Shen Hao, Director of the the director of the Operations Department at PLAN Headquarters, Answers Our Reporter's Questions"), 人民海军 (*People's Navy*), December 27, 2008, p. 3.

40. Huang Li, p. 178.

41. *Ibid.*, pp. 216-19.

42. "Chinese Navy Sends Most Sophisticated Ships on Escort Mission off Somalia," *Xinhua*, December 26, 2008, available from news.xinhuanet.com/english/2008-12/26/content_10565179.htm. While the PLAN has lagged historically in helicopter capabilities, Scott Bray, Senior Intelligence Officer-China, Office of Naval Intelligence, states that it "already employs shipboard helicopters, the MINERAL-ME radar, and datalinks on board a significant portion of its fleet. As more of these systems are fielded and operator proficiency increases, the PLA(N)'s capacity for OTH-T operations will continue to grow." This and all related quotations obtained from ONI Public Affairs Office.

43. Available from cnair.top81.cn/mi-17_sa-342_s-70.htm.

44. Senior Colonel Sun Ziwu, pilot of the Ka-28 on Wuhan, has participated in many foreign visits and military exercises. In the 2004 Sino-French naval exercise, he landed on the French ship. Huang Li, p. 211.

45. "Chinese Navy Sends Most Sophisticated Ships on Escort Mission off Somalia."

46. Huang Li, p. 208.

47. *Ibid.*, pp. 214-16.

48. Data from *Jane's Fighting Ships*, Jane's Information Group, available from www.janes.com; *China's Defence Today*, available from www.sinodefence.com; Huang Li, pp. 203-216.

49. Commander James Kraska, JAGC, U.S. Navy, "Fresh Thinking for an Old Problem: Report of the Naval War College Workshop on Countering Maritime Piracy," *Naval War College Review*, Vol. 62, No. 4, Autumn 2009, p. 141.

50. "Resolution 1846 (2008)," adopted by the Security Council at its 6026th Meeting, December 2, 2008.

51. "Resolution 1851 (2008)," adopted by the Security Council at its 6046th Meeting, December 16, 2008. Resolution 1851 also encouraged creation of a multinational Contact Group on Piracy off the Coast of Somalia. This group of more than 20 nations met for the first time in January 2009. Kraska, p. 141.

52. Report of Security Council 5902nd Meeting (PM) of June 2, 2008, available from www.un.org/News/Press/docs/2008/sc9344.doc.htm.

53. Huang Li, p. 169.

54. *Ibid.*

55. Abdurrahman Warsameh, "Somalis Express Support for China's Naval Operation Against Piracy," *Xinhua*, January 8, 2009, available from news.xinhuanet.com/english/2009-01/08/content_10625418.htm.

56. 石华, 张倍鑫 (Shi Hua and Zhang Beixin), "中国海军索马里护航不收费" ("Chinese Navy Will Protect Ships Free of Charge"), 环球时报 (*Global Times*), December 24, 2008, available from world.huanqiu.com/roll/2008-12/322933.html.

57. "Warships to Set off on Friday for Somalia Pirates," *China Radio International*, December 23, 2008, available from english.cri.cn/6909/2008/12/23/189s435892.htm.

58. Bai Ruixue and Zhu Hongliang, "Commander of the Chinese Flotilla for Escort Missions Says: At Present, the Flotilla Does Not Have a Disembarkation Plan," *Xinhua*, December 26, 2008.

59. Greg Torode, "For PLA, Firing on Pirates is a Political Issue," *South China Morning Post*, November 15, 2009.

60. Interestingly, Somalia lacks an EEZ, instead claiming a territorial sea out to 200 nm. Beijing has avoided calling attention to this anomaly. The author thanks Peter Dutton for this point.

61. Huang Li, pp. 252-53.

62. "Piracy Draws China Back to the Ranks of Maritime Giants," *Agence France-Presse*, December 24, 2008, available from www.google.com/hostednews/afp/article/ALeqM5jStNCMD_SCFJWIPuB0J4LUeWfd0w.

63. Huang Li, pp. 258-62.

64. Sun Zifa, "Chinese Navy Escort Fleet to Adopt Three Modes of Action in Escort," *Zhongguo Xinwen She*, January 3, 2009.

65. "Hong Kong, Macau, Taiwan Ships Can Request Escort of Chinese Mainland Navy," *Xinhua*, January 6, 2009.

66. "Head of International Cooperation Department of Ministry of Transportation Reveals Origins of Decision on Naval Escort," *三联生活周刊 (Sanlian Life Weekly)*, January 16, 2009, available from www.lifeweek.com.cn. The author thanks Nan Li for recommending this source.

67. "Chinese Navy Completes 15 Escort Missions in Gulf of Aden," *Xinhua*, February 6, 2009.

68. Qian Xiaohu and Tian Yuan, "Three Chinese Warships Work Independently in Escort Mission," *Liberation Army Daily*, January 19, 2009.

69. "战斗篇" ("Chapter on Combat"), *当代海军 (Modern Navy)*, July 2009, pp. 10-11.

70. Lieutenant Commander Xie Zengling led the unit on the first deployment. Huang Li, pp. 222, 224.

71. Unless otherwise specified, all data in this section from *ibid.*, pp. 226-236.

72. *Liberation Army Daily*, January 18, 2009.

73. Huang Li, pp. 234-236.

74. The PLAN photographs events to provide legal evidence for its activities. *Ibid.*, p. 253.

75. Xia Hongping and Cao Haihua, "Mayday, Mayday, We are Attacked by Pirates," *Liberation Army Daily*, July 15, 2009.

76. Guo Gang, "Third Chinese Escort Flotilla on Task," *Xinhua*, available from english.chinamil.com.cn.

77. Stephen Chen, "Brave Crew of HK-Flagged Ship Holds Pirates at Bay," *South China Morning Post*, November 14, 2009.

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81. "张家栋:目前首要目标是救人—最快两周内有消息" ("Zhang Jiadong: At Present, the Most Important Goal is to Save Lives—There Will be News within Two Weeks at the Earliest"), 中国网 (*China Net*), October 19, 2009, available from mil.huanqiu.com/china/2009-10/609253.html.

82. Greg Torode *et al.*, "Showdown with Somali Pirates a Test of PLA's Might," *South China Morning Post*, October 22, 2009.

83. Huang Li, pp. 239.

84. "'德新海'号敲警钟—中国需要'远洋存在'" ("'Dexinhai' Sounds the Alarm Bell—China Requires 'Far Seas Presence'"), 国际先驱导报 (*International Herald Leader*), October 28, 2009, available from cn.chinareviewnews.com/doc/7_0_101117202_1.html.

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86. Guo Gang.

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88. Commanding officer: Captain Zou Fuquan; political commissar: Liu Jianzhong.

89. Commanding officer: Captain Xi Feijun; political commissar: Captain Yuan Zehua.

90. Deputy Director, South Sea Fleet Political Department.

91. Huang Li, p. 213.

92. Huang Shubo and Su Yincheng, "Chinese Naval Escort Taskforce Berths in Port Salalah for Rest," *Liberation Army Daily*, July 2, 2009, OSC CPP20090702702030.

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101. Wording taken directly from 孙彦新, 朱鸿亮 (Sun Yanxin and Zhu Hongliang), "军舰护航)中国海军首批护航编队开创人民海军历史上多个" ("Naval Vessel Escort First Chinese Navy Escort Formation Achieves Multiple 'Firsts' in History of People's Navy"), 新华社 (New China News Agency), April 28, 2009. In first bullet, "naval" was added and "jointly" was removed to prevent U.S. readers from assuming mistakenly that non-PLAN forces were involved.

102. Chinese deployments average 3 months in duration, half the U.S. length. This may be attributed to their lack of basing access. Huang Li, p. 213.

103. Alison A. Kaufman, *China's Participation in Anti-Piracy Operations off the Horn of Africa: Drivers and Implications*, conference report, Alexandria, VA: CNA Corporation, 2009, p. 11.

104. Gabriel Collins and Michael Grubb, *A Comprehensive Survey of China's Dynamic Shipbuilding Industry: Commercial Development and Strategic Implications*, China Maritime Study, Vol. 1, Newport, R.I.: Naval War College Press, 2008, p. 32.

105. Goh Sui Noi, "China Not Planning Sri Lanka Naval Base," *Straits Times*, June 24, 2009, OSC CPP20090624094001.

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108. For details, see Guo Gang, “(Escorts by Naval Vessels) ‘Zhoushan’ Frigate from the PLAN’s Third Escort Formation Conducts First In-Port Rest and Consolidation,” *Xinhua*, August 16, 2009, OSC CPP20090816136005.

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111. 黎云, 刘逢安, 武天敏 (Li Yun et al.), “‘跨越—2009’: 一场贴近实战的大练兵——全方位点评 ‘跨越—2009’ 系列跨区实兵检验性演习精彩看点” (“Stride 2009’: A Major Exercise Sticking Close to Actual War”), *解放军报 (Liberation Army Daily)*, August 11, 2009, p. 1.

112. 张庆宝 (Zhang Qingbao), “‘海外经济利益应由自己来保护’ 一本报记者专访国家交通运输部合作司司长局成志” (“We Should Protect Our Overseas Economic Interests’: An interview with Director-General Ju Chengzhi of the International Cooperation Department under the Ministry of Transportation”), *人民海军 (People’s Navy)*, January 9, 2009, p. 4; “Head of International Cooperation Department of Ministry of Transportation Reveals Origins of Decision on Naval Escort,” *三联生活周刊 (Sanlian Life Weekly)*, January 16, 2009, available from www.lifeweek.com.cn.

113. "China Ship Reporting System," PRC Shanghai Maritime Safety Administration, available from www.shmsa.gov.cn/news/200702095400641785.html. This also allows Beijing to summon civilian vessels for national purposes; in January 2008, following the paralyzing snowstorms that caused many parts of China to run short on coal, the Ministry of Transportations requisitioned bulk carriers from China Shipping Group and COSCO and pressed them into service hauling coal to help replenish stockpiles that were depleted during the storms. "Coal Prices Jump, Hit by the Perfect Storm," *SeaTrade Asia*, January 30, 2008, available from www.seatradeasia-online.com/print/2264.html.

114. Zhang Qingbao, "'We Should Protect Our Overseas Economic Interests': An interview with Director-General Ju Chengzhi of the International Cooperation Department under the Ministry of Transport," *People's Navy*, January 9, 2009, p. 4.

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158. For “great maritime power,” 丁玉宝, 郭益科, 周根山 (Ding Yubao, Guo Yike, and Zhou Genshan), “胡锦涛在会见海军

第一次党代会代表时强调: 按照革命化现代化正规化相统一的规则, 锻造适应我军历史使命要求的强大人民海军” (“When Hu Jintao Met with the Naval Delegates at the 10th Party Congress, He Emphasized Building a Powerful People’s Navy That Meets the Requirements to Accomplish Historical Missions of Our Army in Accordance with the Principle of Unifying Revolutionization, Modernization, and Standardization”), 人民海军 (*People’s Navy*), December 28, 2006, p. 1. For “strengthened and modernized,” “Chinese President Calls for Strengthened, Modernized Navy,” *People’s Daily*, December 27, 2006. For “blue water,” “Chinese President Calls for Strong Navy,” *VOA News*, December 28, 2006, available at voanews.com.

159. “China’s National Defense in 2008.” China’s 2006 Defense White Paper further states that China’s “navy aims at gradual extension of the strategic depth for offshore defensive operations and enhancing its capabilities in integrated maritime operations.” Information Office of the State Council, People’s Republic of China, “China’s National Defense in 2006,” December 29, 2006, available from www.fas.org/nuke/guide/china/doctrine/wp2006.html. See also the statements in the official journal of the Central Committee by PLAN commander Wu Shengli, and Political Commissar Hu Yanlin, including, “To maintain the safety of the oceanic transportation and the strategic passageway for energy and resources . . . we must build a powerful navy.” 吴胜利, 胡彦林 (Wu Shengli (PLAN commander) and Hu Yanlin (PLAN political commissar), edited by Wang Chuanzhi), “锻造适应我军历史使命要求的强大人民海军” (“Building a Powerful People’s Navy that Meets the Requirements of the Historical Mission for our Army”), 求是 (Seeking Truth), No. 14, July 16, 2007, www.qsjournal.com.cn, OSC CPP20070716710027. A major study advised by such influential policy makers as Dr. Qiu Yanping, deputy director of the Chinese Communist Party (CCP) Central Committee’s National Security Leading Small Group Office, emphasizes the importance of securing China’s sea lines of communication. Yang Yi, pp. 274, 289, 323–24. While such statements serve these individuals’ bureaucratic interests, they must nevertheless coordinate their statements with PLA and CCP leadership; such naval advocacy would have been impermissible previously.

160. The PLA’s first English-language volume of its type, *The Science of Military Strategy*, emphasizes that SLOC security

is vital to China's long-term development. Peng Guangqian and Yao Youzhi, eds., *The Science of Military Strategy*, Beijing, China: Military Science Press, 2005, p. 446. An edited volume emphasizing the importance of SLOC and maritime oil security has been published by China Institute of Contemporary International Relations (CICIR). See 张运成 (Zhang Yuncheng), “能源安全与海上通道” (Energy Security and Sea Lanes), in *海上通道安全与国际合作* (Sea Lane Security and International Cooperation), 杨明杰 (Yang Mingjie, ed.), Beijing, China: 时事出版社 (Current Affairs), 2005, p. 103.

161. Information Office of the State Council, People's Republic of China, “China's National Defense in 2008,” January 2009, available from www.gov.cn/english/official/2009-01/20/content_1210227.htm.

162. In an interview, M. Gen. Peng Guangqian, Academy of Military Science, and Zhang Zhaozhong, National Defense University, state that in the future China's ground forces will be downsized, the PLAN will be enhanced and become the second largest service, the PLAAF and Second Artillery will stay the same, and there will be new services such as space and cyber forces. Sr. Capt. Li Jie says that China's approach to carriers will be incremental and that once acquired, they will be deployed to important sea lanes and strategic sea locations for conventional deterrence and also deployed for non-traditional security missions. 马振岗 (Ma Zhengang), “‘中国模式’ 会取代 ‘美国模式’” (“Can the ‘Chinese Model’ Replace the ‘American Model’?”), 人民网 (People's Daily Net), October 22, 2009, available from cn.chinareviewnews.com/doc/50_1074_101111301_2_1022081349.html. See also 责任编辑: 吴茗, 邱丽芳 (Wu Ming and Qiu Lifang, duty editors) 七大军区的划分 (The Division of the Seven Military Regions), 新华网 (Xinhua Net), April 8, 2008, available from news.xinhuanet.com/mil/2008-04/08/content_7939418.htm.

163. The PLAAF may be seen as equally technologically intensive, but is not on a par with the PLAN in the other characteristics listed here. Thus, it is hardly surprising that the PLAN is deploying far from China's shores, while the PLAAF has not been deployed abroad since the Korean War.

164. The author must credit Nan Li with these points. This process might be facilitated by gradual development and consolidation of China's civil maritime forces, which could then assume missions within China's coastal waters and EEZ that previously occupied the Navy.

165. Andrew S. Erickson, "International Rescue—China Looks After its Interests Abroad," *Jane's Intelligence Review*, China Watch, Vol. 21, No. 4, April 2009, pp. 50-52.

166. This entire paragraph is drawn from Zhang Yuncheng, "Energy Security and Sea Lanes," p. 124.

167. Because of their lower cost, smaller size, and potentially very quiet operation (e.g., under air-independent propulsion) if neither great speed nor range are not required, diesel submarines are best for littoral operations. The superior speed and range of nuclear submarines (and relative stealth within these demanding performance parameters), together with their ability to support formidable antiship weapons systems, make them essential for blue-water SLOC defense. However, their still-high cost and their need for highly trained crews and sophisticated maintenance facilities make them worth acquiring in substantial numbers only if SLOC defense is prioritized. For detailed explanation of these points, see Andrew Erickson and Lyle Goldstein, "China's Future Nuclear Submarine Force: Insights from Chinese Writings," *Naval War College Review*, Vol. 60, No. 1, Winter 2007, pp. 54-79, and Andrew Erickson, Lyle Goldstein, William Murray, and Andrew Wilson, *China's Future Nuclear Submarine Force*, Annapolis, MD.: Naval Institute Press, 2007.

168. China already has more deck and hangar space on various combatants than it has helicopters and currently the gap is growing. Carriers, more LPDs or even an LHA or two along with more hospital ships and modern DDGs and FFGs call for a dramatic increase in rotary wing force structure. This will also mean more pilots, more mechanics, and the attendant support infrastructure for these systems. For a discussion of potential future steps in Chinese aircraft carrier development emphasizing the difficulties and opportunity costs that would likely be involved, see Nan Li and Christopher Weuve, "China's Aircraft Carrier Ambitions: An Update," *Naval War College Review*, Vol. 63, No. 1,

Winter 2010, pp. 17-35. For indications that China may have decided to devote more resources to deck aviation development, see 邓佑标 (Deng Youbiao), “海军大连舰艇学院首次招收飞行学员” (“Dalian Naval Vessel Academy Recruits Flight Students for the First Time”), 解放军报 (*Liberation Army Daily*), September 5, 2008, p. 5, available at www.chinamil.com.cn, or in English as “Dalian Naval Academy Recruits Pilot Cadets for the First Time,” *Liberation Army Daily*, September 5, 2008, english.chinamil.com.cn.

169. For detailed analysis, see Gabriel Collins and Michael Grubb, *A Comprehensive Survey of China's Dynamic Shipbuilding Industry: Commercial Development and Strategic Implications*, *China Maritime Study* 1, Newport, R.I.: Naval War College Press, 2008.

170. Here China appears to have shipyard capacity but not yet the intention to use it in this fashion. Two of China's 5 fleet AORs are approaching obsolescence. At some point in the next decade, they will have to be replaced. If China intends to support more than limited long range operations, more will need to be added.

171. If China wishes to maintain a limited posture that is focused on day to day operations in peacetime or the ability to participate in MOOTW type scenarios, it will not need tenders. The U.S. has this capability because of its large forward presence and a requirement to conduct a full range of combat operations with its fleet. Unless the Chinese are going to go that route, they only need the capability to conduct minor repairs; any ship needing sophisticated repairs could be sent back to China. In the absence of tenders, a navy determined to conduct significant blue-water SLOC security missions would probably need either the ability to bring technicians along in some capacity, access to technologically sophisticated port facilities, or both.

172. Following the 2004 Indonesian tsunami, for instance, Beijing was unwilling or unable to send ships, but witnessed the United States, India, and Japan receiving significant appreciation for their deck-aviation-based assistance.

173. *The People's Liberation Army Navy: A Modern Navy with Chinese Characteristics*, Suitland, MD: Office of Naval Intelligence, July 2009, p. 19. Scott Bray adds: “ONI bases its assessments of the timeline for operationalization of KUZNETSOV CV Hull 2 (commonly referred to as the former Russian carrier VARYAG) on a

number of factors, including observations of renovations ongoing at Dalian. Reporting from Chinese open sources indicates that the J-15, which is based on the Russian Su-33, is being developed for China's aircraft carrier program. Chinese interest in purchasing the Su-33 appears to have waned in light of indigenous development of J-15. While China has yet to officially announce the existence of an aircraft carrier program, numerous Chinese military officials have made public comments on the program. China likely intends to use aircraft carriers to bring the air component of maritime power to the South China Sea and other regional areas to protect Chinese sea lanes, shipping, and enforcing maritime claims. Additionally, an aircraft carrier would likely be used in regional humanitarian assistance and disaster relief missions."

174. If China's indigenous design mirrors the *Kuznetsov* class (i.e., ski jump vs. catapults) then the vessel will likely have a relatively limited capability, particularly in terms of the type of AEW platform the ship can operate as well as the warloads the fighters can carry.

175. An Indian naval officer, Commander Gurpreet Khurana, assesses, "China and the IOR (Indian Ocean Region) countries involved maintain that the transport infrastructure being built is purely for commercial use. There is no decisive evidence at this point to assert otherwise because these facilities are in nascent stages of development." Gurpreet S. Khurana, "China's 'String of Pearls' in the Indian Ocean and Its Security Implications," *Strategic Analysis*, Vol. 32, No. 1, January 2008, p. 3.

176. This section draws on Michael S. Chase and Andrew S. Erickson, "Changing Beijing's Approach to Overseas Basing?" *Jamestown China Brief*, Vol. 9, Issue 19, September 24, 2009.

177. "Colonel: China Must Establish Overseas Bases, Assume the Responsibility of a Great Power," *Global Times*, February 5, 2009, available from www.chinareviewnews.com/doc/7_0_100877861_1.html.

178. Dai warns that "If we make things difficult for ourselves in this matter by maintaining a rigid understanding of the doctrines of nonalignment and the non-stationing of troops abroad, then it will place a lot of constraints on us across the board. Not

only would we be unable to make use of our influence in international affairs, but even insignificant pirates and terrorists would create large amounts of trouble for us, and our route to revival would most certainly be fraught with more difficulties." *Ibid.*

179. Specifically, Dai recommends that Chinese foreign affairs and propaganda specialists should advance a new "Chinese contribution theory" to counteract the "Chinese expansion theory" and "China threat theory." *Ibid.*

180. Dai states that the base should be "suitable for comprehensive replenishment" and suggests that it could be used to promote common development with neighboring countries. *Ibid.* Several factors suggest that Dai may be using a very modest conception of a "base" here. Development of port facilities in other nations, be they places or bases, to support naval deployments tend to be very different facilities from the type of bases the Chinese have or might develop on such South China Sea islands, which would assist Chinese forces deployed there to enforce Chinese claims. Their small size and lack of fresh water limit their ability to help sustain naval forces on long range deployments.

181. Roy D. Kamphausen and Justin Liang, "PLA Power Projection: Current Realities and Emerging Trends," in Michael D. Swaine, Andrew N. D. Yang, and Evan S. Medeiros, with Oriana Skylar Mastro, eds., *Assessing the Threat: The Chinese Military and Taiwan's Security*, Washington, DC: Carnegie Endowment for International Peace, 2007, pp. 131, 136.

182. The Indian Ocean region contains 62 percent of the world's proven oil reserves, 35 percent of its gas, 40 percent of its gold, 60 percent of its uranium, and 80 percent of its diamonds; as well as other important minerals and industrial raw materials, such as iron, titanium, chromate, lithium, bauxite, cobalt, nickel manganese, rubber, and tin. *BP Statistical Review of World Energy*, June 2009, p. 6, available from www.bp.com/statisticalreview; "Indian Ocean," *CIA World Factbook*, Washington, DC: Central Intelligence Agency, 2007, available from <https://www.cia.gov/library/publications/the-world-factbook/geos/xo.html>.

183. Senior Captain Xu Qi, PLAN, "Maritime Geostrategy and the Development of the Chinese Navy in the Early 21st Century," *China Military Science*, Vol. 17, No. 4, 2004, pp. 75-81. For related Western arguments, see Robert Kaplan, "Center Stage for the 21st Century: Power Plays in the Indian Ocean" *Foreign Affairs*, Vol. 88, No. 2, March-April 2009, pp. 16-23; Thomas Culora and Andrew Erickson, "Arms and Influence at Sea," letter to editor, *Foreign Affairs*, Vol. 88, No. 4, July/August 2009, p. 164.

184. Wang Nannan, ed., "Expert Says China's Advancement toward the Indian Ocean Concerns National Interests and Gives No Cause for Criticism," *Xinhua*, June 10, 2008, available from news.xinhuanet.com/mil/2008-06/10/content_8338128.htm.

185. Sun Ruibo, ed., "The U.S. Military Strengthens Forces on Guam—For What Purpose?" *Xinhua*, July 4, 2008, available from news.xinhuanet.com/mil/2008-07/04/content_8489422.htm.

186. Huang Li, pp. 214.

187. Only the permanent stationing of military troops in another country constitutes a base. A facility may be smaller, have a lower profile—particularly if it is manned primarily by locals, and be more focused on support activities. There is also the issue of who "owns" the facility. For example, Al Udeid Air Base in Qatar is a Qatari Air Force Base. However, while there are probably only 100 or so Qatari personnel stationed there, the facility hosts over 10,000 U.S. personnel but technically it is not a U.S. base. The author thanks M. Taylor Fravel and Daniel Kostecka for these points.

188. Bases do not necessarily constitute a requirement for a major military presence or a desire to project a large regional footprint. France has four naval/air bases in the Indian Ocean: in Djibouti, Reunion, Mayotte, and the United Arab Emirates, but Paris is not accused of attempting to dominate the region.

189. In Mauritius, for example, Chinese media sources report, "China's first overseas special economic zone" has been established. Known officially as the Tianli Economic and Trade Cooperation Zone, the state-guided project could capitalize on the historically warm relations between the two nations. Lei Dongrui,

ed., "Unveiling Our Country's First Overseas Special Economic Zone: Mauritius Tianli Trade Zone," *Guangzhou Daily*, June 10, 2008, available from news.xinhuanet.com/overseas/2008-06/10/content_8338093.htm.

190. Kamphausen and Liang, pp. 111-50.

191. Senior Captain Xu Qi, PLAN, "Maritime Geostrategy and the Development of the Chinese Navy in the Early 21st Century," *China Military Science*, Vol. 17, No. 4, 2004, pp. 75-81.

192. A Chinese Southeast Asia expert notes that Sino-Burmese military and security relations have strengthened, with China assisting in the construction and modernization of Burmese naval bases by repairing and constructing radars and fuel facilities. Burma's leaders, he claims, have pledged to support China if it needs to defend its interests. 林锡星 (Li Xixing), Jinan University Institute of Southeast Asian Studies, "中缅石油管道设计中的美印因素" ("The Influence of the U.S. and India on the Sino-Myanmar Oil Pipeline Proposal"), *东南亚研究 (Southeast Asian Studies)*, No. 5, 2007, p. 34. For a more skeptical assessment, see Andrew Selth, "Burma, China and the Myth of Military Bases," *Asian Security*, Vol. 3, No. 3, September 2007, pp. 279-307.

193. See Lin Zhaowi, "China Offers Help on Strait Security – Malacca Strait Safety Among Possible Areas of Cooperation with S'pore," *Straits Times*, November 13, 2009, OSC SEP20091113118002; and "Singapore and China Sign Defense Pact," *Straits Times*, January 8, 2008, OSC CPP20080108094003.

194. Unless otherwise specified, data from this table are from Sean Gibson, ed., *Ports & Terminals Guide 2009-10*, Vols. 1-4, Surrey, UK: Lloyd's Register-Fairplay Ltd., 2008.

195. "Gwadar Port," *Gwadar News & Business Source*, available from www.gwadarnews.com/gwadar-port.asp.

196. The author thanks Bernard Cole for this point.

197. "A well-executed (Gulf of Aden) operation might tip the balance in favor of those Chinese strategists who want their country to acquire aircraft carriers, large amphibious ships, more effec-

tive attack submarines, many more replenishment and refueling vessels, and other naval instruments to defend Beijing's overseas interests." Richard Weitz, "Operation Somalia: China's First Expeditionary Force?," *China Security*, Vol. 5, No. 1, Winter 2009, p. 38.

198. Robert S. Ross, "China's Naval Nationalism: Sources, Prospects, and the U.S. Response," *International Security*, Vol. 34, No. 2, Fall 2009, p. 46.

199. 高月 (Gao Yue), "海权, 能源 与安全" ("Maritime Rights, Resources, and Security"), *现代舰船* (Modern Ships), December 2004), p. 7.

200. According to Scott Bray, "much of (the) 'remarkable rate' of capability growth for the surface combatant force is the result of improved ASCM range and performance. Similar ASCM improvements also impact the submarine force, naval air force, and coastal defense forces. ASBM development has progressed at a remarkable rate as well. . . . China is developing the world's first ballistic missile for targeting ships at sea. China has elements of an OTH network already in place and is working to expand its horizon, timeliness and accuracy. . . . In a little over a decade, China has taken the ASBM program from the conceptual phase to nearing an operational capability." Quotation obtained from ONI Public Affairs Office.

201. 吴胜利, 胡彦林 (Wu Shengli, PLAN commander) and Hu Yanlin (PLAN political commissar), edited by Wang Chuanzhi, "锻造适应我军历史使命要求的强大人民海军" ("Building a Powerful People's Navy That Meets the Requirements of the Historical Mission for Our Army"), *求是* (*Seeking Truth*), No. 14, July 16, 2007, p. 72, OSC CPP20070716710027. "A New Voyage Toward Scientific Development—Central Military Commission Member and Navy Commander Wu Shengli Answers Questions From Jiefangjun Bao, Zhongguo Qingnian Bao Reporters," *Liberation Army Daily*, April 18, 2009, OSC CPP20090420701001.

202. See, for example, Yang Yi, "Thirty Years of Tremendous Change in the PLA," *Contemporary International Relations*, Vol. 19, No. 1, January/February 2009, pp. 1-8.

203. Donna Miles, "U.S. Welcomes Chinese Plans to Fight Piracy, Admiral Says," *American Forces Press*, December 18, 2008, available from www.defenselink.mil/news/newsarticle.aspx?id=52386.

204. As Huang Li emphasizes, "China has no territorial ambitions in the Indian Ocean, nor are there any historical complications involving China." Huang Li, p. 177.

205. For examples, see Andrew S. Erickson and Wei He, "U.S.-China Security Relations," in *Task Force Report – U.S.-China Relations: A Roadmap for the Future*, Center for Strategic and International Studies Pacific Forum, *Issues & Insights*, Vol. 9, No. 16, August 20, 2009, pp. 7-12.