

China's Maritime Evolution: Military and Commercial Factors

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China is rapidly emerging as a maritime power, with global commercial and regional military influence. Historically preoccupied with securing its land borders, China is now becoming increasingly reliant on the sea to import energy and raw materials as well as transport finished goods to market. Maritime security, therefore, is becoming a more serious strategic concern for Beijing. China's maritime industry contributed roughly 10 percent of national economic output in 2006 and its share of the national economy will likely rise sharply in coming years. As Chinese maritime interests continue to globalize, questions arise concerning the People's Liberation Army Navy (PLAN)'s ability to secure key sea lines of communication (SLOC) in a time of crisis. This disparity arises in part because China's PLAN is currently structured primarily to address sovereignty claims on China's maritime periphery, particularly concerning the status of Taiwan. It is unclear whether China will continue to rely on the U.S. Navy to maintain international SLOC security. Reshaping the PLAN into a "blue water" force capable of protecting sea lanes far from China would be an expensive and strategically provocative venture. This analysis examines the role that China's rapid commercial

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maritime development could play in driving such a transformation and offers barometers that might indicate if China were to pursue such a course.

Key words : *China, Beijing, East Asia, People's Liberation Army Navy (PLAN), Chinese navy, commercial maritime development, economy, sea lines of communication (SLOC), sea lane, blue water, energy, raw materials, exports*

After nearly six centuries of introversion, invasion, and quasi-colonization, China is reemerging as a maritime power, both commercially and militarily. Yet the dimensions, objectives, and trajectory of this phenomenon, which has significant implications for East Asia and the world, remain unclear. Mounting evidence suggests that the purposes and prioritization of China's maritime development is the subject of major domestic debate. PLAN leadership and maritime industry actors are naturally strong proponents of China becoming a major maritime power, but elements of the other PLA service branches and non-maritime interest groups remain less certain, if not opposed. All cite historical lessons and present day phenomena to bolster their arguments. Rather than representing a definitive break with China's continental past, this is the first time in the history of the People's Republic of China (PRC) that a 'maritime faction' truly has a chance to influence national policy. Since China's leaders are unlikely to soon resolve this evolving debate, much less issue definitive policy statements concerning these important issues, their nation's actual maritime course must be probed by more indirect means. By selectively examining China's naval, commercial, and energy sectors, this paper will highlight factors that will likely shape Chinese interests and affect Beijing's ability to pursue them in the maritime domain. Our central argument is that Chinese naval policy formulation is often reactive, as the speed of China's commercial maritime development far outstrips Beijing's ability to create new naval strategy. Thus, analysts cannot rely on official policy documents to provide a true picture, and must instead employ an analytical framework based on factors that could influence China's maritime development trajectories.

An Age-Old Debate

Two primary schools of thought characterize China's naval development debate. At one end, Ye Zicheng, a prominent Beijing University scholar of international relations, holds that while important, sea power "should be limited and should serve and be subordinate to the development of land power."¹ In a separate article published in the monthly journal of the State Council's Chinese Institutes of Contemporary International Relations (CICIR, 中国现代国际关系研究院), Ye adds that historical and geopolitical factors make China a land power first and a sea power second.² The 2005 edition of the PLA's first comprehensive volume on military strategy, edited by two Major Generals, sees many practical limitations to China's successful projection of power on the seas.³

At the other end, former Dalian Vessel Academy instructor Lu Rude holds that by virtue of its maritime territorial area, its maritime rights and interests, the value of its maritime economy, and its participation in international maritime affairs, "China has the characteristics of both a great land state and a great maritime state." Lu contends that China's overall national development "needs the support of a powerful navy."⁴ In their review of Chinese maritime history, published in the quarterly journal of the PLA Academy of Military Sciences, a PLAN Senior Colonel and Lt. Colonel at China's Naval Command College cite trends in economic globalization, geopolitical regionalization, and China's growing maritime economy and trade to argue that Beijing needs to renew emphasis on maritime development.⁵ In the Chinese Communist Party (CCP) Central Committee's

1. Ye Zicheng, "China's Sea Power Must Be Subordinate to Its Land Power," *国际先驱导报* (*International Herald Leader*), March 2, 2007, OSC# CPP20070302455003.

2. Ye Zicheng, "Geopolitics From a Greater Historical Perspective," *Xiandai Guoji Guanxi*, June 20, 2007, OSC# CPP20070712455001.

3. Peng Guangqian and Yao Youzhi, eds., *The Science of Military Strategy* (Beijing: Military Science Publishing House, 2005), p. 449.

4. Lu Rude, "Positioning China's Sea Power in the Grand Strategy," *人民海军* (*People's Navy*), June 6, 2007.

5. Feng Liang and Duan Tingzhi, "Characteristics of China's Sea Geostrategic Security and Sea Security Strategy in the New Century," *Zhongguo Junshi Kexue*, January 2007, pp. 22-29, OSC# CPP20070621436010.

official journal, PLAN Commander Wu Shengli and Political Commissar Hu Yanlin contend that history demonstrates that only a strong Chinese navy can ensure the proper conditions for territorial integrity and national development.⁶ Meanwhile, a high-profile, government-inspired study entitled *大国崛起* (*The Rise of Great Powers*) suggests that while national power can be furthered by a strong navy, it actually stems primarily from economic development, fueled by foreign trade.⁷

In China's foremost military academic journal, *中国军事科学* (*China Military Science*), PLAN Senior Captain Liu Yijian adds "national standing" to the aforementioned reasons why China must increase its naval power.⁸ Building on this theme, an article in the PLAN publication *当代海军* (*Modern Navy*) suggests that China's growing maritime interests and consequent security imperatives must drive the formulation of an essential vision that China has previously lacked: sea power consciousness, a theory of sea power, ocean utilization plans, and a conception of active sea defense to inform a comprehensive grand strategy.⁹ Xu Qi, a PLAN Senior Captain, believes that China cannot afford to delay in pursuing such a course: "China's... maritime geostrategic relationships... are undergoing profound change. ...China's navy must make (important) strategic choices."¹⁰ What those choices will be, and

6. 吴胜利, 胡彦林 (Wu Shengli and Hu Yanlin; and 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), *Qiushi*, July 16, 2007 at <<http://www.qsjournal.com.cn/qs/20070716/GB/qs^459^0^10.htm>>.

7. As a 12-part program on China Central Television (CCTV) and an 8-volume book series, *The Rise of Great Powers* has enjoyed considerable popular exposure in China. Conceived on November 24, 2003 at the CPC Central Committee Political Bureau group session "Study of Historical Development of Major Countries in the World Since the 15th Century," and completed in 2006, it attempts to determine the reasons why nine nations (Portugal, Spain, the Netherlands, the United Kingdom, France, Germany, Japan, Russia, and the U.S.) became great powers. "The Rise of Great Powers" at <<http://finance.cctv.com/special/C16860/01/index.shtml>>.

8. Liu Yijian, "Theory of the Command of the Sea and its Development," *Zhongguo Junshi Kexue* (*China Military Science*), January 2005, pp. 42-46, OSC# CPP20050427000217.

9. Zhan Huayun, "Strategic Use of the Seas-Knocking at the Door of a Grand Strategy," *Dangdai Haijun*, May 2007, pp. 17-19, OSC# CPP20070626436011.

10. 徐起 (Xu Qi), "21 世纪初海上地缘战略与中国海军的发展 (Maritime Geostrategy and the Development of the Chinese Navy in the Early 21st Century),"

which factors will inform them, can only be inferred by examining multiple facets of China's rapid but uneven commercial maritime development.

China's Growing Commercial Maritime Interests

While Chinese strategists debate China's status as a "maritime" versus "land" power, the reality is that China's commercial stake in the global maritime arena is growing rapidly. Senior Captain Xu Qi outlines the increasingly global scope of China's maritime interests, stating that today "(China's) open ocean transport routes pass through every continent and every ocean (and) through each important international strait (to) over six hundred ports in over 150 nations and (administrative) regions." Xu projects that: "By 2020, China's maritime commerce will exceed U.S. \$1 trillion. It may be (come) necessary to import three-quarters of (China's) oil from overseas."¹¹

Globalization has, over the past several decades, driven a massive increase in the maritime transport of raw materials and finished products. Roughly 80 percent of international trade is carried by sea.¹² No exception to this trend, China receives raw materials by sea, ships out its finished goods through its rapidly developing ports, and is also becoming a premier global shipbuilder. These areas will now be addressed in turn, with a particular focus on factors that may come to propel further Chinese naval development.

On the raw materials side, China is now the world's largest importer of iron ore, with industry insiders estimating that it will import 370-80 million tons in 2007, primarily from Brazil and Australia.¹³ To put this figure into perspective, the 2005 global

中国军事科学 (*China Military Science*) 17, 4 (2004), pp. 75-81. Translation by Andrew Erickson and Lyle Goldstein published in *Naval War College Review* 59, 4 (Autumn 2006).

11. *Ibid.*

12. "Hong Kong Trails Singapore in 2005 Container Volume," *Bloomberg.com*, January 16, 2006 at <<http://www.bloomberg.com>>.

13. "Brazilian Iron Ore Major No Longer Merely a Miner: CVRD Wants to Expand its Maritime Influence," *Lloyd's List International*, June 15, 2007, *Lexis-Nexis* at <<http://www.lexis-nexis.com>>.

seaborne iron ore trade totaled 670 million tons.¹⁴ China is likewise a major consumer of non-ferrous metals (e.g., tin and aluminum), and much of this feedstock comes by sea from such locations as Africa and Australia. China also imports timber from Africa, Southeast Asia, and Latin America. Beijing is the world's third largest oil importer (3.3 million barrels/day), taking the bulk of its oil supplies from the Middle East and Africa. Finally, China has begun importing liquefied natural gas (LNG) and coal from Australia and Indonesia.

Chinese companies also depend on cheap, efficient maritime transport to move finished goods to world markets. In 2004, five of the top twenty global container ports were Chinese; together they accounted for roughly one-quarter of global container traffic that year. If the Hong Kong S.A.R. is counted, then Chinese ports moved nearly 40 percent of world container volume in 2004. Chinese ports continue to expand aggressively and as China's economy grows, its share of the global container trade is likely to rise even further.

China's maritime trade role is not limited to consuming raw materials and shipping finished goods. Chinese shipping companies are rapidly expanding their fleets, while burgeoning Chinese shipyards seek to become world leaders. The PRC central government recently affirmed shipbuilding as a "strategic industry" in need of "special oversight and support."¹⁵ The industry's growth has been explosive. From producing only 220,000 deadweight tons of commercial shipping in 1980, Chinese shipyards launched over 13 million tons of new ships in 2006, and are on track to exceed 20 million tons annually by 2010.¹⁶ Furthermore, total Chinese maritime trade is expected to reach one trillion U.S. dollars annually by 2020,¹⁷ much of which will be carried on Chinese-built merchant vessels.

Although international commercial sales currently account for the vast majority of tonnage output, the recent emergence of *Luyang II* and *Luzhou*-class air-defense destroyers, *Jiangkai-*

14. "The Iron Ore Market: 2005-2007," UNCTAD at <<http://www.unctad.org/infocomm/iron/covmar06.htm>>.

15. "China to Limit Foreign Investment in Shipyards," *Shanghai Daily*, September 19, 2006 at <<http://www.shanghaidaily.com/article/?id=292385&type=business>>.

16. Derived from new construction and order book statistics in Lloyd's Register - Fairplay, Ltd., *Register of Ships* at <<http://www.sea-web.com>>.

17. Xu Qi, *op. cit.*

class frigates, and two new classes of nuclear-powered submarines from PRC shipyards raises questions regarding the degree to which China's commercial shipbuilding prowess is furthering PLAN modernization. All of these classes represent notable advances in technology and complexity over previous Chinese warships, and the shipyards that produced them are simultaneously engaged in both military and commercial construction.

The cumulative affects of China's improved commercial shipbuilding abilities have undoubtedly benefited China's naval development to some degree. The slow development of an indigenous sub-component and marine propulsion industry has limited the direct civil-to-military benefits of China's booming commercial shipbuilding sector, but the PLAN will likely gain from the increased infrastructure capacity for modern ship construction, repair, and conversion driven by commercial shipbuilding.

Although less tangible, the indirect effects of China's commercial shipbuilding development perhaps provide the most significant benefits to long-term PLAN modernization. The systems complexity, hull designs, and materials used in warship design and construction may often differ from those of the commercial shipbuilding market, but experience in modern commercial block construction techniques translates into military production efficiencies. Chinese naval architects, mechanical engineers, welders, and shipyard laborers gaining ever more experience in commercial shipbuilding provide a strategic ready-reserve of fundamental shipbuilding skills with applicability to military production if ever needed. Whether propelling China to commercial shipbuilding dominance, large-scale naval expansion, or a more moderate level of both, China's rapidly growing shipbuilding industry will increase China's overall maritime power, and remain an important strategic factor worthy of close attention for years to come.

Given that China's maritime industry already accounted for 10 percent of Chinese GDP (\$270 billion) by 2006 and that the industry's output could nearly quadruple in dollar terms to \$1 trillion by 2020,¹⁸ protection of maritime industry could well become an important rationale informing naval development

18. *Ibid.*

decisions. At present, Chinese maritime companies are advancing more quickly than the government can develop relevant maritime policies. However, key aspects of China's growing maritime dependence and role are garnering attention in Beijing. Foremost among these is China's growing dependence on long-distance oil imports that originate from often volatile areas in Africa and the Middle East, and must then cross SLOCs that are currently beyond the PLAN's defensive reach. Since oil has the highest profile of the key imported commodities, China's maritime energy security actions over the next 5-10 years may be key indicators of the country's broader approach to securing its maritime commerce.

Maritime Energy Security

China currently obtains approximately 85 percent of its imported oil by sea. 40-45 percent comes from the Middle East and nearly a third from Africa. Although China has reduced its Middle Eastern oil import share by roughly 20 percent in recent years, Middle Eastern imports continue to grow in absolute terms. China faces serious maritime energy security concerns, as Middle Eastern imports are being replaced by African oil that must cross the same long Indian Ocean sea lanes to reach China. Chinese officials encourage state oil and gas producers to diversify away from the unstable Middle East and increase the share of oil imports that come overland by pipeline.¹⁹

However, while land-based oil pipelines will help diversify China's oil import channels to some extent, they cannot replace maritime oil transport.²⁰ Available overland supplies from Russia and Kazakhstan and other areas are insufficient to offset China's rapidly growing seaborne oil imports. In response, various Chinese groups and outside analysts (including those from Pakistan) have suggested constructing oil pipelines from

19. Wang Qiyi, "Energy Conservation as Security," *China Security* (Summer 2006), p. 90.

20. 凌云 (Ling Yun), "龙脉 (The Dragon's Arteries)," *现代舰船 (Modern Ships)*, (October 2006). Quotations are from p. 12.

Sittwe, Burma or Gwadar, Pakistan to China.²¹ Yet offloading seaborne crude in Burma or Pakistan in order to avoid the Strait of Malacca makes little economic sense because relatively small volumes of crude would have to be pumped at very high cost to interior regions of China far from the booming East Coast demand centers, and then re-distributed once again from the pipeline termini to the main consuming areas.

Chinese analysts and policymakers are beginning to face the reality that China will remain heavily dependent on maritime oil imports. This movement has not fully made its way into official policy documents, as shown by the fact that China's 2006 Defense White Paper, an 83-page document, only mentions the word "energy" twice, and neither instance refers to a strategic, operational, or maritime context. "Oil" is only mentioned twice, both in reference to internal bureaucratic issues. That said, examining China's concrete actions thus far concerning oil security reveals a somewhat different situation.

A wide variety of Chinese energy-related analyses express deep concern that during a crisis the U.S., or another outside power such as India or Japan, could sever China's seaborne oil imports. In reality, the global oil trade functions in such a way that the only means of reliably sealing off China's oil supply lines would be to implement a close blockade of China's long, well-defended coastline. This would encourage escalation and would likely be considered only in the context of a full-scale war. Given these realities, the idea of a blockade being used to pressure China during crisis situations short of war seems impractical and ill-advised. The logical conclusion of this line of argument would seem to be that China does not need a blue water navy to secure its oil supplies and should instead rely on the proven flexibility of the world market.²²

However, like many other major oil consuming countries in

21. "China-Myanmar Oil Pipe Work to Begin This Year," *Reuters*, April 21, 2007 at <<http://www.uofaweb.ualberta.ca/chinainstitute/nav03.cfm?nav03=59981&nav02=58211&nav01=57272>>; "President Musharraf Promises to Make Pakistan 'Energy Corridor for China'," *BBC*, June 15, 2006 at <<http://www.uofaweb.ualberta.ca/chinainstitute/nav03.cfm?nav03=47067&nav02=43874&nav01=43092>>.

22. For further details, see Gabriel Collins and William Murray, "China's Counterblockade Options," Gabriel Collins, Andrew Erickson, Lyle Goldstein, and William Murray, eds., *The Maritime Implications of China's Energy Strategy* (Annapolis, MD: United States Naval Institute Press, forthcoming).

the past (including, arguably, France, Japan, and the U.S.),²³ China appears to be uncomfortable with relying solely on the global oil market to ensure energy access. Beijing currently favors a more mercantilist approach to oil security. China's petroleum security strategy is evolving as the National Development and Reform Commission (NDRC) and other Chinese energy-policy-making bodies realize that equity oil (i.e., direct ownership of oil reserves) does not guarantee oil security.²⁴ Instead of the previous focus on securing overseas oil production, the new aim may be to control the transport of oil back to China.²⁵ To accomplish this, Beijing is encouraging its state-controlled and private oil shipping companies to construct a tanker fleet that within 15 years will be able to haul up to 70 percent of China's oil imports (more than 3 million barrels per day).²⁶

The precise level of state involvement in China's tanker fleet expansion remains unclear, as a range of normally-authoritative Chinese sources give conflicting signals. The authors' spring 2007 interviews with well-informed Chinese scholars suggest that Beijing presently has no coherent plan for creating a national tanker fleet. However, articles from state-controlled media outlets *Xinhua News Agency* and *China Daily* feature analyst Luo Ping from the NDRC-affiliated Institute of Comprehensive Transportation (ICT) calling for at least 60 percent of oil imports to be carried by Chinese shipping companies, which are now rapidly expanding their tanker

23. France has long emphasized state-to-state deals, though this has been moderated in recent years. Japan has previously established a state oil firm charged with securing oil overseas. Tokyo made legal changes aimed at disbanding the firm in December 2001, but as China and India have become demand side players in the world oil market with their own national companies, Tokyo has now created INPEX, a new Japanese state firm with a mandate to secure oil and gas for Japan. Since the Carter Doctrine was established in 1980, the U.S. has used force to secure the flow of oil when necessary.

24. Andrew Erickson and Gabriel Collins, "Beijing's Energy Security Strategy: The Significance of a Chinese State-Owned Tanker Fleet," *Orbis* (Fall 2007); ____, "Tanking Up: The Commercial and Strategic Significance of China's Growing Tanker Fleet," *Geopolitics of Energy*, 29, 8 (August 2007), pp. 2-11.

25. Gabriel Collins, "China's Seeks Oil Security with New Tanker Fleet," *Oil & Gas Journal*, 104, 38 (October 9, 2006), pp. 20-26.

26. *Ibid.*, pp. 20-26.

fleets.²⁷ The NDRC is not the only high-level state body apparently calling for a national tanker fleet. According to *China Daily*, Peng Cuihong, a senior official at the Ministry of Communications' Water Transport Department, claims that China will expand its tanker fleet to reduce reliance on foreign oil carriers.²⁸

China's increased emphasis and apparent determination to control the mid- and down-stream segments of its oil and gas supply chain has direct military implications. Protecting upstream assets (e.g., oilfields) is very difficult and requires that substantial ground forces enter a sovereign country and secure the area. Defending midstream assets (e.g., tankers at sea) is more feasible, but requires robust naval and aviation capabilities. Enhancing downstream security – the easiest of the three areas in which to increase energy security – entails improving domestic energy infrastructure by raising and diversifying refining capacity to accept a broader range of crude oil feed stocks and establishing a strategic petroleum reserve (SPR). China has made the most progress in this area, perhaps in part because of the overwhelming economic rationale for doing so. In the future, Chinese naval and aerospace force modernization might be driven in part by the perception that China requires the capability to protect its resource supply lines in a crisis.

There are two additional areas in which China's military may play a role in maritime energy security. The first involves securing China's growing offshore oil and gas production. The Bohai Bay, East China Sea, and South China Sea (particularly near the Pearl River Delta) now account for a rising proportion of Chinese hydrocarbon production as the large onshore Daqing and Shengli fields gradually decline.²⁹ China and Japan have a long-running dispute over gas field development in the East China Sea's Xihu Trough and both sides have occasionally made shows of force in the area.³⁰ If substantial oil and gas

27. "China Must Carry 60% of Seaborne Oil Imports on Local Shippers," *Xinhua Financial Network News*, June 14, 2007; "More Oil Tankers Taking to the Sea," *China Daily*, June 14, 2007 at <<http://www.chinadaily.com.cn>>.

28. "More Oil Tankers Taking to the Sea," *Ibid.*

29. "Daqing to Cut Oil Production," *China Daily*, September 22, 2003 at <http://www.chinadaily.com.cn/en/doc/2003-09/22/content_266205.htm>.

30. See, Jean-Marc F. Blanchard, "The U. S. Role in the Sino-Japanese Dispute over the Diaoyu (Senkaku) Islands, 1945-1971," *China Quarterly*, 161 (Mar., 2000), pp. 95-123.

deposits are found further into the South China Sea (e.g., near the Spratlys), Chinese forces might acquire a specific littoral energy security portfolio. Finally, in the event of regional instability, Chinese naval and air forces could be called upon to secure Bohai Bay production facilities.

The second “new” maritime energy security area involves China’s growing LNG imports. These will likely enhance any extant desire among Chinese policymakers for an independent SLOC security capability. In the case of LNG SLOC security, being able to protect one’s supply lines militarily may turn out to be more important than with oil. LNG is physically more difficult to handle than oil and not as easily tradable. As a result, ties between LNG producers and consumers tend to be very direct. LNG projects are typically served by dedicated tankers that carry LNG on one route (e.g., Qatar-Japan) and cargoes are rarely resold at sea. From a military perspective, this would make shipments much easier to interdict because – in contrast with oil cargoes – it would be relatively simple to determine where an LNG cargo was headed. If an LNG carrier were confiscated, moreover, there would be scarcely any excess capacity elsewhere that could replace it, unlike what is usually the case with oil tankers. This means that a consumer nation has a strong motivation for possessing the capacity to militarily defend its LNG supply lanes, if it relies to a significant extent on LNG, which China does not yet do. Presently, LNG carriers being built to serve Chinese terminals are either Hong Kong- or PRC-flagged.

To date, China has enjoyed a “free ride” on the U.S. Navy’s global SLOC security guarantee. Yet China’s rising maritime energy interests and naval power could lead it to seek a more active SLOC security role. A steady, reliable supply of oil and other imported resources fuels the economic growth that helps the Chinese Communist Party maintain its hold on power. Thus, anything that disrupts this flow would be a grave threat to regime survival and Beijing could be expected to react strongly. In short, China’s growing oil and gas import needs, together with the actions that Beijing is taking to secure the mid- and down-stream legs of those supplies, have the potential to generate serious international maritime security concerns. As the PLAN continues to modernize, and compete for further budget allocations, outside observers should bear in mind that nations’

intentions and desires often grow in parallel with expanding capabilities. Energy and resource supply security may thus become a powerful rationale for Chinese blue water naval development 'beyond Taiwan.' "China's maritime strategy is evolving along two paths," states the U.S. Office of Naval Intelligence (ONI). "First, China is focused on a regional anti-access capability, which is principally applicable in preventing third-party intervention in a Taiwan scenario. Second, China is simultaneously expanding its maritime strategy to include a mission to protect China's growing dependence on maritime commerce for economic development."³¹

Future Trajectories

Some Chinese analysts view "island chains" in the Western Pacific alternatively as benchmarks of China's progress in maritime force projection; or, conversely, as fortified barriers that China must continue to penetrate to achieve freedom of maneuver in the maritime realm.³² Former PLAN Commander Admiral Liu Huaqing and others have defined the First Island Chain, or current limit of most PLAN operations, as being formed by Japan and its northern and southern archipelagos, South Korea, Taiwan, the Philippines, and Indonesia (from Borneo to Natuna Besar). The Second Island Chain, which Liu envisioned as being fully within the scope of future PLAN operations, runs from the Japanese archipelago south through the Bonins, the Marianas (including Guam), the Carolines, and Indonesia.³³ The logical goal, then, would seem to be the development of a Chinese navy that can perform a progressively far-ranging combination of sea-denial, area-denial, and power-projection within and out to these island chains.³⁴

31. Scott Bray, "Seapower Questions on the Chinese Submarine Force," U.S. Navy, Office of Naval Intelligence, December 2006 at <<http://www.fas.org/nuke/guide/china/ONI2006.pdf>>.

32. See, for example, Alexander Huang, "The Chinese Navy's Offshore Active Defense Strategy: Conceptualization and Implications," *Naval War College Review* 47, 3 (Summer 1994), p. 18.

33. See, Liu Yijian, *op. cit.*, p. 437.

34. For an overview of the today's PLAN and its capabilities, see Andrew S. Erickson, "Can China Become a Maritime Power?," in Toshi Yoshihara and James Holmes, eds.,

By contrast, drawing on a variety of Chinese sources, James Holmes and Toshi Yoshihara contend that China's naval power projection will be directed not eastward across the Pacific but rather south and west along the strategic sea lanes to Africa and the Middle East.³⁵ Major moves on China's part to bolster its strategic position along Indian Ocean oil SLOCs could provoke a wide variety of countervailing pressures, however.

Chinese naval development to date has centered on preparing for a Taiwan contingency and ensuring that China can defend its other sovereignty claims along its increasingly economically vital maritime periphery. A critical question, then, is: what directions might PRC naval development take if one looks 'beyond Taiwan' and factors in longer-term strategic trends, including growing Chinese global economic interests? Several indicators may help outside observers gauge China's intentions with regard to both the degree and geographic focus of any development of blue water SLOC defense capability.³⁶

Undersea Warfare

To protect its own SLOCs and interdict enemy naval forces or shipping in the Indian Ocean and other distant areas, China will need to build and deploy a number of nuclear attack submarines (SSNs). A significant SSN force would give China's PLAN the ability to operate without air cover far from coastal home ports. It also capitalizes on the fact that even world-class blue water navies (e.g., that of the U.S.) still face substantial challenges in conducting anti-submarine warfare due to inherent physics-based limitations. The key indicator that China plans to develop an expanded SSN fleet for operation beyond 'local' waters would be signs of increased construction at recognized facilities (e.g., at Huludao, China's main nuclear-capable shipyard, where many of its diesel submarines are also built). Since China to date has built SSNs at only one shipyard, construction at more than

Asia Looks Seaward: The Emerging Dynamics of Regional Sea Power (Westport, CT: Praeger Security International, forthcoming 2007).

35. James Holmes and Toshi Yoshihara, "China's Naval Ambitions in the Indian Ocean," *Journal of Strategic Studies*, forthcoming.

36. The authors are indebted to Prof. William Murray for articulating these concepts.

one shipyard might indicate a change in aspirations.

The PLAN appears to have made submarines the centerpiece of what can only be described as a rapid, comprehensive naval modernization program, launching thirteen submarines between 2002 and 2004 alone.³⁷ In addition to purchasing the extremely quiet *Kilo*-class diesel submarine in large numbers, the PLAN, recently commanded by a nuclear submariner, is producing four classes of submarines: two classes of indigenously designed diesel vessels (*Song*/Type 039 and *Yuan*/Type 041) and two classes of nuclear vessels (the *Shang*-class/Type 093 SSN and *Jin*-class/Type 094 SSBN). As many as 14 hulls of three successively refined versions of the *Song*-class diesel-electric submarine have been launched thus far, defying Western predictions that the series was a failure and that production would halt upon purchase of Russian platforms. ONI states that while the *Jin* “will provide China with a modern and robust sea-based nuclear deterrent force,” the *Shang* constitutes “an effort to improve the PLA(N)’s ability to conduct anti-surface warfare at greater ranges from the Chinese coast than its diesel submarine force offers.”³⁸ Two *Shang*-class SSNs were reportedly launched in 2002 and 2003 and may have begun sea trials in 2005 and 2006, with projected service entry dates of 2007 and 2008 respectively. A third hull, possibly of a more advanced design, is allegedly nearing completion.³⁹ *Jane’s* predicts that three additional *Shangs* will be built in the near future.⁴⁰ The *Shang* is thus thought to already be replacing the 5 hulls of China’s Type 091 *Han* class first generation SSN.

Based on photos and anecdotal evidence, Chinese submarines go to sea frequently, if not usually for missions of long duration. China’s submarine force, prioritized for development, seems set to range ever further afield. According to ONI, the growing technological capabilities of the PLA(N) submarine force and China’s evolving maritime strategy, which calls for an

37. Jim Yardley and Thom Shanker, “Chinese Navy Buildup Gives Pentagon New Worries,” *New York Times*, April 8, 2005.

38. Scott Bray, *op. cit.*

39. Richard D. Fisher, Jr., “Trouble Below: China’s Submarines Pose Regional, Strategic Challenges,” *Armed Forces Journal* (March 2006), 34.

40. “Defense Production and R&D, China,” *Jane’s Sentinel Security Assessment – China and Northeast Asia*, December 13, 2006, *Jane’s Information Group* at <<http://www.janes.com>>.

operational capability beyond the littoral in support of an anti-access mission, create the conditions for Beijing to opt for an increased submarine presence in the Western Pacific Ocean east of the Ryukyu Island chain.⁴¹

There is some evidence that China may rely on centralized control of its submarines, at least for certain missions. In conducting offensive mine blockades, for example, one PRC analysis notes that “most submarine forces operate primarily in a single-submarine, independent mode, and if there is a shore-based submarine command post to handle command and guidance of the submarine for its entire course, it will not only ensure its concealment but also improve the strike effectiveness of the mines... that are laid.”⁴² Clearly further study is necessary to determine the precise capabilities of China’s rapidly developing submarine force and its personnel to facilitate PLAN power projection.⁴³

Surface Combatants

If China acquires or builds an operational aircraft carrier, this would indicate an ambition to conduct blue water operations. The PLAN would face a steep learning curve in carrier operations, however. Naval aircraft operations are very difficult to master and the construction of the carrier and its escorts, as well as their maintenance, is a very expensive proposition.⁴⁴ Nonetheless, the PLAN has demonstrated that it can build modern surface combatants equipped with long-range surface-to-air missiles (SAMs). China’s *Luyang* II destroyers (hulls 170

41. Scott Bray, *op. cit.*

42. Ying Nan, “Goals of Offensive Mine-Laying Discussed,” *Jianchuan Zhishi*, 1999, pp. 10-11, FBIS # FTS19991022001765.

43. For further information on the evolution and potential trajectory of PLAN nuclear submarines, see Andrew S. Erickson, Lyle J. Goldstein, William S. Murray, and Andrew R. Wilson, *China’s Future Nuclear Submarine Force* (Annapolis, MD: Naval Institute Press, 2007).

44. For further details, see Andrew Erickson and Andrew Wilson, “China’s Aircraft Carrier Dilemma,” *Naval War College Review*, 59, 4 (Autumn 2006), pp. 13-45 at <http://www.cfr.org/publication/12036/chinas_aircraft_carrier_dilemma.html?breadcrumb=%2Fregion%2Fpublication_list%3Fgroupby%3D1%26page%3D1%26id%3D271>.

and 171) carry the HHQ-9 SAM, the two *Luzhou*-class destroyers have a marinized SA-20 SAM, and the four *Jiangkai II* frigates have vertical launch cells and phased array and guidance radars that strongly suggest a similar area air defense capability.

Chinese shipyards are rapidly increasing their technical proficiency and can build vessels of aircraft carrier-size (although they likely do not yet have sufficient systems integration proficiency to indigenously construct a sophisticated carrier). Yet to date, most Chinese shipyards have focused primarily on commercial construction. If China's leaders choose to dedicate a larger portion of their nation's huge shipyard capacity to military construction, this might indicate that the PLAN is looking to rapidly expand its blue water-capable fleet. The first test of this 'green field' indicator will come by approximately 2009, when China State Shipbuilding Corporation's Jiangnan Shipyard moves to the new Changxing Island Shipbuilding Base in Shanghai. CSSC has thus far billed Changxing Island as a modern commercial facility "capable of building various high-tech ships, such as LNG ships, offshore engineering facilities and cruise ships,"⁴⁵ but the Jiangnan Shipyard it is replacing has also been an important builder of China's most advanced naval combatants. Jiangnan, in the recent past produced (or is currently producing) several classes of frigates, destroyers, and submarines, including *Luyang II* air-defense destroyers and *Song*-class diesel submarines. A shift of Jiangnan's share of military production to another of China's older shipyards (vice Changxing Island) would be a strong reaffirmation of commercial shipbuilding's dominant position in the PRC's strategic priorities, while introducing naval construction at the Changxing Island 'green field' facility would indicate a more mixed set of strategic priorities.

A PLAN decision to expand its auxiliary fleet – particularly long-range, high-speed oilers, tenders, and replenishment ships – could also indicate blue water ambitions. Even the best fighting ships will remain worthless for blue water combat operations unless they can be refueled, repaired, and re-supplied at sea far from China's coast. Chinese shipyards are already among the

45. CSSC, "CSSC's Changxing Shipbuilding Base" at <<http://www.cssc.net.cn/enlish/jtcy1-jd.php>>.

world's most prolific builders of tankers and other cargo vessels and could likely transfer their capacity, as well as technical and human skills, very quickly if a decision were taken to construct a modern long-range auxiliary fleet.

Forward Basing

Chinese acquisition of reliable, U.S.-style overseas bases in the Indian Ocean region would also indicate intent to protect key oil SLOCs military. While some foreign analysts express concern about China's involvement in modernizing the Pakistani port of Gwadar, China is currently far from having anything close to a naval base beyond Chinese waters. To sustain a serious naval presence in the Indian Ocean, the PLAN would need to substantially expand its at-sea replenishment capacity and also secure basing rights in locations such as Pakistan, Burma, and perhaps Sri Lanka or Bangladesh.⁴⁶ India and other naval powers would likely oppose an overt Chinese naval presence in the Indian Ocean region, and might pressure these countries not to accept Chinese forces. In a sign of U.S. ability to cooperate with regional nations to promote collective strategic interests, the U.S. Marine Corps and Sri Lankan Navy held major exercises in October 2006 near the Sri Lankan port of Hambantota, where China is looking to build oil storage and bunkering (ship refueling) facilities.⁴⁷

Even if China did eventually gain basing rights in an Indian Ocean littoral state, were a conflict to erupt such bases would be almost impossible to defend from Indian or U.S. naval and air attacks. India already has a formidable naval force, including the aircraft carrier *Viraat* and TU-142 long range maritime patrol aircraft, which have tracked Russian-made warships transiting

46. Numerous Indian media reports and several U.S. studies have alleged that China has significant access to some Burmese ports and intelligence facilities. Andrew Selth of the Griffith Asia Institute believes that insufficient evidence has been produced to substantiate these claims. Andrew Selth, "Chinese Military Bases in Burma: The Explosion of a Myth," *Griffith Asia Institute: Regional Outlook* 10 (2007). For an Indian perspective on this subject, see CDR Gurpreet S. Khurana, "China's 'String of Pearls' in the Indian Ocean: An Assessment," *Strategic Analysis* (2007, forthcoming).

47. Rahul Bedi, "U.S. Marines to Train Sri Lankan Navy," *India eNews*, October 25, 2006 at <<http://www.indiaenews.com/srilanka/20061025/26189.htm>>.

the Indian Ocean on their way to China.⁴⁸ As such, if China did intend to defend its oil shipments in the Indian Ocean (assuming that these were being carried on Chinese-flagged tankers), the PLAN would likely need SSNs and surface warship battle groups, perhaps including aircraft carriers, to achieve its objectives. China would also have to be able to rapidly locate and destroy very quiet submarines in the open ocean, something it cannot currently do.⁴⁹ In short, the military operational barriers to China entering the Indian Ocean are very high. Moreover, even if Beijing did somehow overcome the aforementioned obstacles and obtain overseas bases, it would have to radically modify its foreign policy to permit this practice, as current PRC foreign policy explicitly proscribes overseas basing of Chinese military forces.

Blue Water Training

Finally, China would need to substantially bolster long-distance deployments and training in order to achieve high levels of operational proficiency and maritime presence in strategic areas. Such operations are complex and expensive. In 2006, the U.S. military spent more than \$50 billion on naval operations in the Persian Gulf alone.⁵⁰ Intensive, realistic, and frequent training is critical to building the institutional experience and human expertise that undergird successful blue water naval operations. While China already has the platforms and training to be a formidable force in its home littoral,

48. "India, U.S. Hold Joint Naval Exercises," *Xinhua*, September 4, 2007 at <http://news.xinhuanet.com/english/2007-09/04/content_6661544.htm>.

49. For citations of Chinese sources that suggest widespread acknowledgement of current PLAN inability to conduct effective ASW, see Gabriel Collins, Andrew Erickson, Lyle Goldstein, and William Murray, "Chinese Evaluations of the U.S. Navy Submarine Force," *Naval War College Review*, forthcoming.

50. At present, one analyst estimates, the U.S. spends a baseline figure of roughly \$50 billion annually to safeguard oil flows from the Persian Gulf. This figure does not include the ramped up expenditures for sustaining operations in Iraq and Afghanistan, which would push the total to more than \$130 billion per year. Milton Copulos, President, National Defense Council Foundation, "The Hidden Cost of Oil," Hearing before the Committee on Foreign Relations of the United States Senate, 109th Congress, 2nd Session, Washington DC, March 30, 2006.

acquiring the platforms and operational proficiency to be a credible blue water SLOC defender will require many times the capital and human investment necessary to become a strong littoral power.

The PLAN, rapidly advancing in terms of platforms, is beginning to realize that it must make larger investments in training to forge a new generation of Chinese naval warriors. Yet building human capital takes much more time, investment, and careful management than does platform acquisition. There are some indications that PLA exercises are moving towards jointness, but it remains unclear how successful the PLA has been in actually accomplishing its goals. A *People's Navy* article acknowledges that our current training level has not fully met the requirement of winning local maritime warfare ... the training intensity and difficulty are not fully commensurate with the real war requirements, the training system has not yet met the requirement of training under a condition of informatization, the relatively low aptitude of the naval personnel remains a prominent issue, (and) training support building still lags behind.⁵¹

While the 1999 “Military Service Law of the People’s Republic of China” has significantly reformed the PLAN’s enlisted force, for instance, it remains dominated by rural males with limited education, and demobilization can still undermine unit cohesion and expertise.⁵² To the extent that they are not overcome, it is essential to factor such remaining difficulties into analytical calculations as outside researchers consider the possibility of China attempting to project naval power beyond the East Asian littoral.

Implications for Maritime Northeast Asia

As China continues to increase its hard and soft maritime power projection potential — and hence the capability, if not the

51. “Conscientiously Put Military Training in a Strategic Position-First on Promoting the Innovation and Development of Military Training in the Navy in the New Stage of the New Century,” *人民海军 (People’s Navy)*, July 26, 2006, p. 1.

52. Office of Naval Intelligence, *Handbook on China’s Navy 2007*, pp. 73-77, 86.

intention – to challenge U.S. ability to project power in maritime East Asia, Washington and Beijing will need to develop a positive but realistic understanding of their respective strategic roles in the Asia-Pacific that might be best described as ‘competitive coexistence.’⁵³ Central to this relationship will be each side’s actions with respect to Taiwan.⁵⁴ The pace and extent of China’s maritime development, which is clearly an important issue, but whose outcome is yet unclear, will play a critical role in shaping this process.

The Republic of China (ROC) Navy is numerically inferior to the other major regional navies in terms of surface combatants, submarines, and naval aviation. Part of this disparity stems from the fact that the ROC Navy is intended to serve as a defensive force capable of holding an adversary at bay until outside assistance arrives. Moreover, Taipei’s defense spending remains seriously constrained by parliamentary politics and has fallen as a proportion of GDP since the 1990s. Taiwanese defense spending as a proportion of GDP fell steadily from 1990 until 2004, when it stabilized at around 2.2-2.4 percent of GDP.⁵⁵ In 2007, the expenditure will likely rise from 2.4 to somewhere near 3.0 percent of GDP because Taiwan’s Legislative Yuan has finally authorized a spending package that brings formerly extra-budgetary arms purchases into the formal military budget.⁵⁶ This marks the first significant rise in Taiwan’s military spending since the late 1990s. In contrast, Beijing’s officially stated military budget has been growing at an average

53. For further elaboration on the complex challenges facing Sino-American relations, see “Hoping for the Best, Preparing for the Worst: China’s Response to U.S. Hegemony,” with Lyle Goldstein, *Journal of Strategic Studies*, 29, 6 (December 2006), pp. 955-986.

54. For a cogent summation of U.S. Taiwan policy, see “A Strong and Moderate Taiwan,” Thomas J. Christensen, Deputy Assistant Secretary for East Asian and Pacific Affairs Speech to U.S.-Taiwan Business Council Defense Industry Conference, Annapolis, Maryland, September 11, 2007 at <<http://www.state.gov/p/eap/rls/rm/2007/91979.htm>>.

55. “The SIPRI Military Expenditure Database” at <http://first.sipri.org/non_first/milex.php>.

56. “Increasing Defense Budget Shows Taiwan’s Self-Defense Resolve,” *ROC Central News Agency* (via [GlobalSecurity.org](http://www.globalsecurity.org)), August 17, 2007 at <<http://www.globalsecurity.org/wmd/library/news/taiwan/2007/taiwan-070817-cna01.htm>>.

of 15% per year since 1990.⁵⁷

Taiwan's surface and air platforms are primarily later generation American systems including *Kidd*-class destroyers; *Oliver Hazard Perry*, *Knox*, and (French-made) *LaFayette* class frigates; and F-16 fighter aircraft. Taiwan also has approximately fifty cruise-missile-armed patrol boats and four diesel-electric submarines, two of which are WWII-era U.S. *Guppy*-class boats and two of which are 1980s-vintage Dutch-made *Zwaardvis* boats.⁵⁸ These systems are not global state of the art, but retain sufficient lethality to give Taiwan's small but modern surface and aerial naval forces a considerable capabilities for their size, at least on paper. However, the ROC Navy already seriously lags behind the PLAN in mine and submarine warfare capabilities.

China's PLAN, by contrast, has made undersea warfare a focal point of its naval modernization to date. As things stand now, the ROC Navy would be hard pressed to keep Taiwan's SLOCs open during a Chinese submarine and mine blockade. The PLAN already has a quantitative edge in surface combatants and naval aviation in the Taiwan theater and numerical and capability balances are both shifting in China's favor. Viewed realistically, even a dramatic rise in Taiwan's defense spending is unlikely to offset the long-term trends toward overwhelming PLAN superiority vis-à-vis the ROC Navy.

Beyond Taiwan, China's rise as a maritime power has significant implications for its neighbors, both commercial and strategic. The rapid development of maritime forces in China, Japan, and South Korea raises the unsettling possibility of competition in a region that remains burdened with historical grievances and territorial disputes even as demand for energy and other resources continues to grow.

Japan is in the process of restructuring its extremely capable maritime forces, reportedly because of growing Chinese and North Korean naval activity near its waters as well as increased participation in peacekeeping and humanitarian missions in Iraq,

57. "China's National Defense in 2006," Information Office of the State Council, People's Republic of China, December 29, 2006 at <<http://www.fas.org/nuke/guide/china/doctrine/wp2006.html>>.

58. "Submarine Proliferation: Taiwan Current Capabilities," *Nuclear Threat Initiative* (NTI) at <<http://www.nti.org/db/submarines/taiwan/index.html>>.

Indonesia, and elsewhere.⁵⁹ Japan's regional maritime role and its relations with China, in particular, remain complicated by territorial disputes in the East China Sea, with attendant resource and sovereignty issues.⁶⁰ Indeed, Chinese submarines and oceanographic survey vessels have recently been detected in waters near Japan.⁶¹ In December 2006, the Diet passed a law that transformed the Japan Defense Agency (JDA) into a formal ministry. This initiative, one step of many that will be required to make Japan a 'normal' nation militarily, gives the JDA significant influence over weapons procurement and restructuring to meet new challenges. However, Japan's defense budget recently shrank for the fifth year in a row. The 2007 budget is \$41.57 billion, down \$109 million from 2006 (though it must be noted that Japan's economy enjoys extremely low inflation). Missile defense allocation is the exception, rising to \$1.54 billion, up \$360 million (30.5 percent) from 2006.⁶²

In 2006, plans were announced to spend \$717 million for four 5,000 ton destroyers to be delivered by 2015, though no builder has yet been selected. The JMSDF also plans to consolidate its escort divisions by reducing their number from twelve to eight and increasing the number of ships in each from three to four. The JMSDF also intends to create two new divisions, one a DDG group and the other a DDH that incorporates helicopter carriers. The total force would then consist of 47 destroyers and 16 submarines. Two 13,500-ton 16DDH helicopter carriers are scheduled for commissioning in 2009 and 2010, with up to seven more under consideration. The vessels will be built by IHI Marine United and will be able to carry 12 helicopters. This will help the Japan Maritime Self Defense Force (JMSDF) support its increasing peacekeeping and humanitarian missions. Japan is also acquiring BMD-capable destroyers, led by the *Atago* (improved *Kongo*)-class that is being fitted out this year, and a

59. Wendell Minnick, "Japan Pushes Forward on Modernization, Upgrades," *DefenseNews.com*, March 19, 2007 at <<http://www.defensenews.com>>.

60. Jean-Marc F. Blanchard, "China's Peaceful Rise and Sino-Japanese Territorial and Maritime Tensions," in Sujian Guo, ed., *China's "Peaceful Rise" in the 21st Century* (Aldershot: Ashgate Publishing, Ltd, 2006).

61. See Andrew Erickson, Lyle Goldstein, and William Murray, "'Gate Crashing': China's Submarine Force Tests New Waters," *Chinese Military Update*, 2, 7 (April 2005), pp. 1-4.

62. Wendell Minnick, *op. cit.*

second *Atago* that is on order. Two more *Atagos* are currently in the planning stage. Japan is also fitting its *Kongo*-class destroyers with SM-3 missile interceptors. Finally, the JMSDF commissioned its fifth and final *Takanami*-class DDG in 2006.

On a positive note for Sino-Japanese relations, bilateral trade reached more than \$167 billion in 2004. China replaced the U.S. as Japan's largest trading partner that year, Japan became China's second largest. Japanese foreign direct investment (FDI) in China exceeded \$5 billion in 2004.⁶³ However, as the world's second largest economy by many metrics and an extremely technologically capable nation with world-class shipbuilding ability, Japan retains significant latent capacity to develop its maritime forces to defend its perceived maritime interests, should the public support the necessary funding and constitutional revision.

Meanwhile, South Korea is substantially modernizing and expanding its previously coastally-focused navy. Like China and Japan, it relies heavily on energy imports through the Strait of Malacca. Unlike Northeast Asia's other two great exporters, however, it has a natural overland trade corridor that is currently blocked by a North Korean regime that has thus far refused to reform its autarkic economy, let alone its political system. This makes security of nearby sea lanes all the more vital for Seoul. South Korea's "future prosperity depends on the use of the sea," states one of its naval officers. "Building a naval force to defend this maritime domain is becoming a key issue in the ROK's future national security strategy."⁶⁴ While Seoul's maritime strategy remains unclear, it seems likely to involve developing capability to balance against China and Japan, both of which it has maritime territorial and historical disputes with (though more significant in the case of Japan). While possessing fewer economic and technological resources than Japan, South Korea nevertheless boasts formidable intellectual capital and the world's most competitive shipbuilding industry (in terms of both price and technology).

63. Yukie Yoshikawa, "Okinotorishima: Just the Tip of the Iceberg," *Asia Quarterly*, IX, 4 (Fall 2005) at <<http://www.asiaquarterly.com/content/view/29/>>.

64. Richard Halloran, "S. Korea Looks to the Open Seas for Regional Military Strength," *Taipei Times*, July 3, 2007, p. 9 at <<http://www.taipetimes.com/News/editorials/archives/2007/07/03/2003367904>>.

Fortunately, there are ways to channel Northeast Asian naval development in a way that promotes peace and furthers regional economic development and integration. A positive framework for advancing maritime cooperation in East Asia and other regions was articulated in September 2005 at the 17th International Seapower Symposium, held at the U.S. Naval War College. Then-U.S. Chief of Naval Operations Admiral Michael Mullen (now Chairman of the Joint Chiefs of Staff) called for a series of global maritime partnerships in the form of a 'Thousand Ship Navy' that would bring the maritime forces of friendly nations together based on their abilities, needs, and interests to provide collective security against such threats in the maritime commons as energy transport interruption, piracy, proliferation of weapons of mass destruction (WMD), human trafficking, drug smuggling, and natural disasters.⁶⁵ On 20 September 2006, the U.S. and Chinese navies held the nations' first ever bilateral military exercise.⁶⁶ Other exercises have been held in the South China Sea.⁶⁷ China has also been invited to cooperate more closely with the U.S. Navy and to join the Thousand Ship Navy. In April 2007, during PLA Navy commander Vice Admiral Wu Shengli's visit to the U.S., Admiral Mullen asked Admiral Wu to consider "China's potential participation in global maritime partnership initiatives."⁶⁸ Admiral Wu reportedly "expressed interest" in the proposal and "asked for more information... so that he would better acquaint himself about it."⁶⁹ In a world of diminishing resources and proliferating non-traditional security threats, it is to be hoped that maritime powers throughout the Asia-Pacific

65. Admiral Michael Mullen, "Remarks as Delivered for the 17th International Seapower Symposium," Naval War College, Newport, RI, September 21, 2005 at <<http://www.navy.mil/navydata/cno/mullen/speeches/mullen050921.txt>>.

66. "U.S., Chinese Navies Complete SAREX Together," *Navy Newsstand*, September 21, 2006 at <http://www.navy.mil/search/display.asp?story_id=25702>.

67. The Information Office of the State Council of the People's Republic of China, "China's National Defense in 2006," December 29, 2006, pp. 31-33 at <<http://www.chinaview.cn>>.

68. P. Parameswaran, "U.S. Asks China to Help Maintain Global Maritime Security," *Agence France Presse*, April 5, 2007.

69. P. Parameswaran, "Plea by Pentagon to Top Naval Visitor," *The Weekly Standard*, April 6, 2007 at <http://www.thestandard.com.hk/news_detail.asp?we_cat=3&art_id=41726&sid=13026608&con_type=1&d_str=20070406>.

and around the world are able to maintain a broader perspective even as disagreements erupt concerning parochial interests.⁷⁰

Conclusion

It is important to recognize that Beijing itself may not know precisely where its maritime policies may lead, and that its interests may change over time. In a thought-provoking article, Jeffrey Legro cautions that knowledge of China's present policies, no matter how sophisticated, cannot tell us conclusively how those policies may evolve in the future:

Even if we had access to the inner workings of the Chinese government today, it is unlikely that information could tell us about future aims. Even if China today has some secret plan for world hegemony or world harmony, those aims will be subject to change by China's very growth and the process by which it unfolds. Ironically even China's top leaders, despite their concentrated political power, cannot know with certainty what their country will want.⁷¹

This challenge applies directly to divining the future trajectory and scope of China's maritime development: over the long run, there is no way to conclusively predict a simple centralized policy 'push' because China's internal debate is less than transparent, ongoing, and subject to a wide variety of factors. This study has therefore endeavored to examine two of those factors – military and commercial development – and some of their many concrete manifestations in order to achieve broader understanding of the directions in which China's future policies may be 'pulled.'

Many pressing domestic problems (e.g., income inequality, rural underdevelopment, ethnic minority concerns, and environmental degradation) could divert Beijing's attention

70. For ideas concerning a promising area for cooperation, see "Combating a Truly Collective Threat: Sino-American Military Cooperation Against Avian Influenza," *Global Health Governance: The Scholarly Journal for the New Health Security Paradigm*, 1, 1 (January 2007) at <http://diplomacy.shu.edu/academics/global_health/journal/PDF/Erickson-article.pdf>.

71. Jeffrey W. Legro, "What China Will Want: The Future Intentions of a Rising Power," *Perspectives on Politics*, 5, 3 (September 2007), p. 515.

from maritime development.⁷² However, at least some of these factors might motivate China's leaders to seek remedies, or at least political diversion, with maritime resource exploitation and commerce, as well as naval development and even operations (e.g., against Taiwan). This uncertainty makes Beijing's assurances that its rise is inherently 'peaceful' and that it will never seek hegemony incomplete – however earnest at present and useful for raising the political costs of any future move toward aggressive policies. Fortunately, however, neither does it foreordain a future of maritime conflict in East Asia.

In assessing PLAN development, Beijing's bureaucratic opacity imposes a variety of challenges in addition to Legro's caveat about changing national interests and perceptions. A deductive ("top-down") research approach is easy to define but hard to implement because much Chinese decision-making is unclear. Insufficient information is available, bureaucratic processes are intentionally (and unintentionally) opaque, official statements are insufficient and obfuscated, and controls of press and speech limit the process of public inquiry common in democracies. Hence, the linkage between PRC policies and implications for maritime development are difficult to determine with any degree of certainty. An inductive ("bottom-up") approach, by contrast – the one pursued in this study – is easier to implement but is hard to correlate with specific research questions. As scholars grapple with various combinations of these two imperfect approaches, important questions for further research will include:

- What is the precise nature of the strategic debates underlying naval development in the Chinese context?
- What choices have been made about allocating naval resources within the overall military budget?
- How are these interpreted by China's leaders as they work to balance their nation's overall external interests against the need to focus internal development and a wide variety of potential domestic pressures?

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72. See, for example, Elizabeth Economy, "China's Coming Environmental Crash," *Foreign Affairs* (Sep.-Oct. 2007), pp. 38-59.

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